IT MENTOR
Bob Hilsdon explains how he used ITIL to achieve a breakthrough in customer service. **PAGE 28**

WISDOM OF THE AGES
Bart Perkins spots 12 things you know about good project management — but choose to ignore. **PAGE 34**

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MARCH 12, 2007 ▪ VOL. 41 ▪ NO. 11 ▪ $5/COPY

Corporate IT Sticks With Office Formats

Private sector shows little interest in adopting OpenDocument alternative

BY CAROL SLIWA

The governments of Massachusetts, Belgium and Hong Kong are game to try the Open Document Format for Office Applications. But in corporations from Honolulu to Los Angeles to Cincinnati, there's scant usage and little planning for it.

The XML-based OpenDocument format is one of the technologies that could free IT managers to realistically consider alternatives to Microsoft Corp.'s dominant Office suite.

But *Computerworld* polls of IT managers suggest that Microsoft's stranglehold on the office applications market isn't in any imminent danger.

At last week's Premier 100 IT Leaders Conference in Palm Desert, Calif., a whopping 88% of 210 respondents to an electronic poll indicated they either hadn't considered an alternative to Office or had done so only casually.

Office's proprietary binary formats have often forced companies to stick with the

Office Format, page 40

INSIDE
XML documents may be smaller than expected, thanks to compression.
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PREMIER 100 IT Seeks An Edge

At *Computerworld*'s Premier 100 conference, IT execs discussed the importance of being innovative. Plus: A Q&A with former Massachusetts CIO Louis Gutierrez, and some offbeat IT management tactics. Pages 8-9

ALSO: Don Tennant says when IT leaders face defining moments in their careers, they should "do the right thing." Page 20

BEST IN CLASS: Read about 10 innovative IT projects. See supplement between pages 14 and 15.

Offshoring Grows Up

It's not just for cheap commodity work anymore. Now companies are taking a nuanced approach to global sourcing.

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POLLY BECKER

Texas House Votes to Exempt Clerks From Privacy Laws

Bill would allow public records with Social Security numbers to stay on Web

BY JAIKUMAR VIJAYAN

The Texas House of Representatives last week passed an emergency bill that exempts courthouse clerks in Texas from state and federal laws requiring that Social Security numbers be kept confidential.

The bill has moved on to the Texas Senate for debate and a vote. If passed by a two-thirds majority, it would go into effect immediately.

The legislation would negate a Feb. 23 ruling by Texas Attorney General Greg Abbott that disclosing Social Security numbers in public documents violates state and federal privacy laws.

Abbott's opinion made it a criminal offense — punishable by jail time and fines — for the clerks to disclose Social Security numbers when making court records available to the public. The rule would force courthouse clerks to check for

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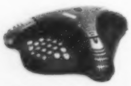

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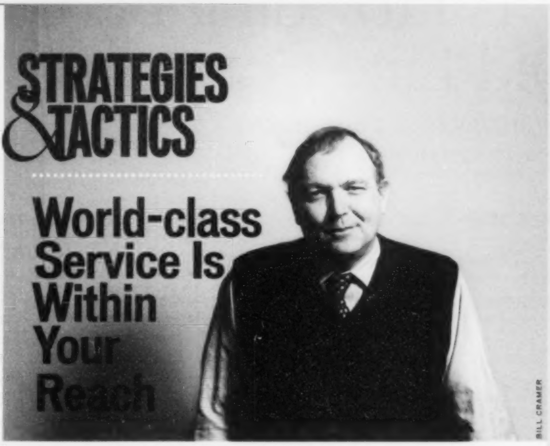
World-class Service Is Within Your Reach

BILL CRAMER

Rohm and Haas Co. used an IT service catalog and five guiding principles to achieve a breakthrough in IT customer service. IT Mentor Bob Hilsdon explains how the ITIL tool can work for your company. **Page 28**

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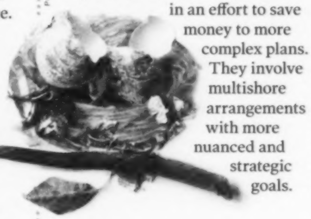

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www.computerworld.com/networking

Server Virtualization 101

HARDWARE: Columnist Jonathan Hassell suggests a workflow and other tips for server virtualization newbies.
www.computerworld.com/hardware

Corporate Data Grows Fiftyfold in Three Years

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www.computerworld.com/storage

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NETWORKING: These plug-ins can streamline development tasks and give you souped-up functionality and a better look and feel. And some are just plain cool.
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SECURITY: Could Wal-Mart's eavesdropping incident turn into this year's HP scandal? A former IT security staffer for the retailer says it may not be what you think.
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Eight Reasons Tablet PCs Have Missed the Mainstream

MOBILE/WIRELESS: Tablet PCs like Fujitsu's LifeBook T4000 haven't caught fire among everyday consumers, remaining a niche product for specific professions. Cost and technology problems are among the reasons.
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AT DEADLINE

Ohio University Names New CIO

Ohio University has hired a permanent CIO to lead the school's IT office, which last year was hit with a series of data security breaches that resulted in the firing of two IT workers and the resignation of CIO William Sams. J. Brice Bible, interim CIO and assistant vice president for IT at the University of Tennessee, Knoxville, will take over the OU post on April 16. He replaces interim CIO Shawn Ostermann.

Vonage Fined for Patent Infringement

A federal jury ordered Vonage Holdings Corp. to pay $58 million in damages to Verizon Communications Inc. after finding that it had infringed on three Verizon patents. After the verdict, Verizon asked for a permanent injunction to stop Vonage from using the technology altogether. Vonage said it expects the verdict to be reversed on appeal. Verizon sued Vonage last June seeking $197 million in damages.

No Patches From Microsoft This Week

Microsoft Corp. said that it will skip this week's Patch Tuesday. In its monthly advance notification bulletin, Microsoft said, "No new Microsoft Security Bulletins will be released on March 13, 2007." This is the first time in 18 months that Microsoft has not issued at least one security update in a scheduled patch rollout on the second Tuesday of a month.

Balsillie Resigns as RIM's Chairman

Jim Balsillie has resigned as chairman of Research In Motion Ltd., accepting blame for his role in a stock-option scam that will cost the company $250 million in restated earnings. The stock-option woes are forcing RIM to restate its earnings statements for fiscal years 2004, 2005 and 2006, and for the first quarter of 2007. Balsillie will remain as RIM's co-CEO and serve on the company's board.

HPC Is Providing Boost To Old-Line Companies

Manufacturers say high-performance computing reduces design, test times

BY PATRICK THIBODEAU

A KEY PIECE of a legislative push to boost U.S. competitiveness could lead to a significant increase in spending on high-performance computing research.

The America Competes Act, introduced into Congress last week by Sen. John Ensign (R-Nev.), calls for doubling research budgets at two agencies responsible for studying high-performance computing (HPC): the U.S. Department of Energy and the National Science Foundation.

The high-end technology is already providing significant benefits at two veteran manufacturing companies, according to executives at each.

Mark Crawford, vice president of engineering at Simpson Strong-Tie Co., knows firsthand the benefits of HPC to old-line manufacturing companies. Simpson Strong-Tie makes metal connectors used in construction and is in many ways the polar opposite of the Web 2.0 companies springing up near its Pleasanton, Calif.-based headquarters.

But this manufacturer may be one of the more high-tech companies around, because it uses a Linux Networx Inc. high-performance computer for both design and testing in its product development efforts.

Virtual Environment

For most of its 50 years, Simpson Strong-Tie built its metal connectors by making and then testing physical prototypes. Last year, it began using HPC to test product variations in a virtual environment.

Crawford said the system helped cut product development time — a product that may have taken six months to develop in the past now takes just three.

Crawford said that the HPC system is now "one of the key aspects to maintaining our competitive advantage." Simpson Strong-Tie can now more quickly investigate complex designs and see how its connectors fare in various conditions, such as during high winds, he noted.

The company had used desktops for some of the engineering work involved in designing connectors, but computations could take a week and weren't always completed. That prompted the company to turn to the Linux Networx system, which has 14 Opteron processors, to run its Abaqus Inc. engineering software.

Simpson Strong-Tie's connectors are made of light-gauge steel and are used to join wood, as well as wood to concrete and masonry. Complex engineering is needed because "the strength of these joints is what essentially holds a building together," especially during a hurricane or earthquake, said Crawford.

Creating realistic simulations is compute- and time-intensive, but HPC systems can distribute jobs to individual nodes, so complex jobs can now be run overnight, said Frank Ding, research and design engineer at Simpson Strong-Tie.

Today, the company uses the HPC technology to determine how connectors will perform on various building substructures, Ding said.

IDC data indicates that many large companies are turning to HPC. According to the Framingham, Mass.-based research firm, worldwide HPC revenues are growing by about 9% annually, making HPC one of the fastest-growing computer technologies. The market is projected to reach $14.3 billion by 2010, IDC said.

Ping Inc. also turned to HPC technology to hasten product development and testing, said Eric Morales, a staff engineer at the Phoenix-based maker of golf clubs. Ping's Cray XD1 high-performance system, installed in 2005, has substantially reduced the time needed to develop golf clubs, he said.

"HPC is working great for us. We can get our answers faster, and we can increase the resolution of the simulations to get more accurate results at the same time," Morales said. "The computer and software that we purchased has already paid for itself." ▸

NSF Official: U.S. Must Step Up Long-Term Research

WING: Users "are basically putting Band-Aids on our software."

JEANNETTE WING is focused on the future.

And later this year, she will be responsible for shaping it as the new head of the recently formed computer and information science and engineering directorate at the National Science Foundation.

Wing, who now chairs the computer science department at Carnegie Mellon University, hopes to change past computer research methods by expanding the long-term focus. Keeping on the current track – which involves working mostly on short-term or midrange projects – could lead to long-term problems for the U.S. government, private industry and users, she said.

"Today in security, we are patching systems and fighting viruses and worms and doing source-code analysis using techniques that the basic research community invented 20 years ago, or even longer [ago] than that," said Wing.

Consequently, users "are basically putting Band-Aids on our software and trying to build better intrusion-detection systems," said Wing, while the basic research needed to protect against future threats is neglected.

She said that more technology and science leaders need to follow the lead of Microsoft Corp. Chairman Bill Gates, who last week called for increases in basic research funding in testimony before a U.S. Senate committee studying U.S. competitiveness. Gates' testimony was a rare moment in the spotlight for basic science – a subject that can produce glazed-over eyes among lawmakers and members of the media.

"We cannot say it enough; we can't say it loud enough," Wing said.

The NSF funds 87% of all federally supported computer science research through a budget of about $530 million for the group that Wing will begin to manage on July 1.

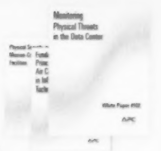
Wing said the NSF aims to fund research that private industry doesn't – namely basic, long-range research without any immediate payback. She said her job will be to make long-term concerns real, immediate and relevant to users.

Eugene Spafford, executive director of the Purdue University Center for Education and Research in Information Assurance and Security, said that the NSF and other federal agencies that promote computer science research mostly tend to fund shorter-term projects today.

As a result, the NSF currently is more likely to spend money on projects to devise better ways of patching existing systems than it is to invest in research projects that may take three years, five years or longer, Spafford said.

"Really innovative basic research that could lead to major shifts in the way we do things . . . isn't really being done now," he said, and as a result, "students being trained now are not being trained to look at long-term solutions."

– PATRICK THIBODEAU



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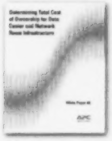

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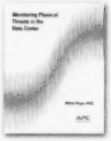

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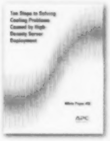

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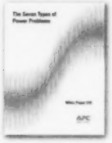

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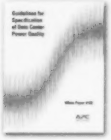

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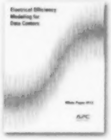

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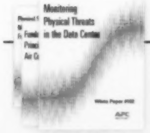

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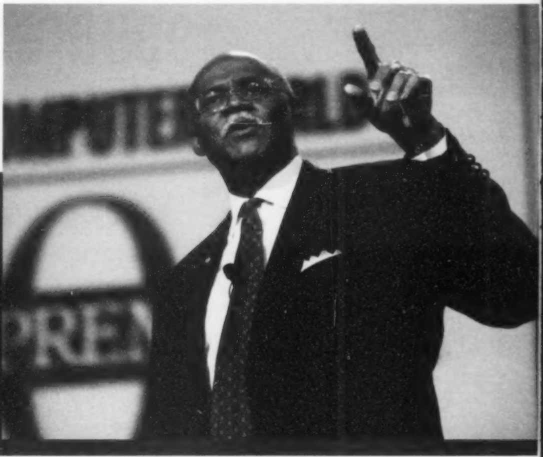
Innovation Goes Back To Top of IT's Agenda

Execs say companies should look for an edge with technology — not just use it to try to cut costs

BY JAIKUMAR VIJAYAN AND CRAIG STEDMAN
PALM DESERT, CALIF.



> **If it's all about cost, you won't get to heaven. You won't go to hell, but this is about getting to heaven.**
>
> H. JAMES DALLAS, CIO, MEDTRONIC INC.

WHEN CIO H. James Dallas attended his first NASCAR race about 10 years ago, he learned some fast lessons — not about driving stock cars around an oval at high speeds, but about fostering innovation within an IT department.

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IT LEADERS CONFERENCE

At that race in Richmond, Va., Dallas listened to radio communications between the drivers and their pit crews as they plotted race strategies. What he found, Dallas said at *Computerworld*'s Premier 100 IT Leaders Conference here last week, was that NASCAR teams "are constantly striving to be innovative. They're always looking for an edge."

IT departments need to adopt the same kind of mentality, said Dallas, who is now CIO at Medtronic Inc., a maker of medical devices in Minneapolis. And it has to start from the top: "CIOs have to get back to leading," he said, noting that top IT executives need to be able to find creative and passionate people within their organizations "and give them air cover so they can go out and be innovative."

Neither part of that equation is easy, according to Dallas. IT managers have to judge the person who proposes an idea in addition to the idea itself, he said. And then they have to find the money required to fund projects.

"We're out there competing for resources in our organizations," Dallas said. "And if we don't get what we need, then it's not 'Shame on management,' it's 'Shame on us.' "

In addition, companies that want to have innovative IT departments have to be prepared to take risks with technology and accept some failures, said Bruce Goodman, chief service and information officer at Humana Inc., a Louisville, Ky.-based health insurer. "A culture supportive of trial and error is necessary, because a lot of things are not going to work," Goodman said.

Humana has set up one group within IT that is focused on strategic innovation inside the company and another that is exploring ways to take advantage of vendor innovations. It has also established a project management office to ensure that ideas generated by the two groups are acted on promptly. And the insurer has created a formal process for trying out new ideas "very, very quickly" in small pilot projects, Goodman said.

He recommended that IT executives set part of their budgets aside for so-called greenfield projects. And instead of measuring the viability of such projects using traditional metrics, Goodman noted, companies should judge them using other yardsticks, such as how they affect customers.

Open to Suggestions

Another key to fostering internal innovation is a willingness to accommodate ideas from outside the IT organization, said Steve Ellis, executive vice president of the wholesale services group at Wells Fargo & Co. in San Francisco.

For instance, about 75% of the enhancements made to Wells Fargo's Commercial Electronic Office (CEO) business banking portal since it was launched seven years ago have been customer-driven, Ellis said. Wells Fargo doesn't build anything on the CEO site, he added, without first getting feedback from customers. "The voice of the customer is different from the voice of the company," Ellis said.

To be effective at leading change internally, IT units first need to establish credibility with business users, said Tom Lindblom, chief technology officer at CKE Restaurants Inc. in Carpinteria, Calif. "Users have to feel like they're not wasting their time if they're coming to you with business issues," he said.

Filippo Passerini, global ser-

MONEY AT THE READY

Do you have a secret budget stash earmarked for IT innovation?

YES: 58%

NO: 42%

Base: 159 attendees polled electronically at the Premier 100 conference. The results don't include six respondents who answered "don't know."

Offbeat IT Tactics

IT leaders share some secrets of their management styles

We Don't Need No Stinkin' Badges

James Onalfo wears a three-star badge as part of his job as deputy commissioner and CIO for the New York City Police Department. "It's like the army," he said. "But when I have meetings with my IT staff, I want everybody participating. So I told them, 'Let's leave rank at the door.' " There's a downside, though: Onalfo said he's getting into a lot of arguments now. "Maybe I went too far," he joked.

No Patience for Dog-and-Pony Shows

William Pence, senior vice president and CTO at Napster Inc., said he often gets contacted by IT vendors that "want me to meet with 15 people." He responds by asking for a rate sheet and giving them a written rundown of his technology needs. "We don't have a lot of time for the traditional sales cycle," Pence said.

Just Say No to New Ideas – at First

A boss at a previous employer left IT executive **H. James Dallas** sitting in a waiting room for not one, not two, not three, but four scheduled meetings. When Dallas persisted and requested a fifth meeting, the boss accepted the request within two minutes. Now, as CIO at Medtronic Inc., Dallas routinely tells IT workers "no" when they first propose ideas to him. "I want to see who has passion – who won't give up," he said.

Let's Do It My Way

Barry Shuler, senior vice president of IT strategy and CTO at Marriott International Inc., said his natural style in working with end users "is more velvet two-by-four than it is carrot." Shuler has changed that approach over the years in order to get IT projects approved. "But," he said, "I still sometimes feel, if you could just see how you could change things my way, we could get things done."

PREMIER 100 PHOTOGRAPHY BY ASA MATHAT

vices officer and CIO at The Procter & Gamble Co., said the Cincinnatti-based consumer goods maker folded its IT unit into a shared-services organization several years ago as part of an effort to "try to be distinctive, or unique, in what we can create" for end users.

"Instead of just running faster and faster, we decided we should change how we run," Passerini said. P&G now sets IT project deliverables in increments of 30, 60 or 90 days and gives tech workers "commercialization" training, he explained. The company even changed the name of its IT operation to Information & Decision Solutions, because the "IT" label "wasn't descriptive any longer of what we wanted it to be," he said.

P&G's CEO keeps tabs on IT cost issues, Passerini noted, "but he's equally interested in discovering what is possible through the use of technology."

In the end, using IT simply to cut costs — without focusing on innovation — isn't enough to achieve true business success, Dallas said.

"If it's all about cost, you won't get to heaven," he said. "You won't go to hell, but this is about getting to heaven." ▸

Getting 'Paranoid' About Security

Yahoo Inc. has a small, select team of IT security staffers who are embedded into each of the company's engineering and product management groups. "We felt strongly that security can become an afterthought if it's created as a separate organization," Yahoo CIO **Lars Rabbe** said. "We thought it was important to make it part of the process, so that security becomes part of the job." The security team's adopted name pretty much ensures that it won't be an afterthought: In a move perhaps more fitting for a punk rock band, the security staffers call themselves the Paranoids.

– ERIC LAI AND CRAIG STEDMAN

Gutierrez Feels 'Bittersweet Pride' After Political Battles

Former Mass. CIO says he would make same choices again

BY CAROL SLIWA
PALM DESERT, CALIF.

Q&A *As CIO of Massachusetts from February to November of last year,* **Louis Gutierrez** *had to endure most of the brunt of Microsoft Corp.'s political wrath over a state policy calling for agencies to adopt the Open Document Format for Office Applications, or ODF — a rival to the software vendor's new Office Open XML file format.*

Gutierrez also faced IT funding issues in the state legislature, ultimately leading him to resign in protest. Now a consultant at Exeter Group Inc. in Cambridge, Mass., Gutierrez took part in a panel discussion on defining moments in IT leadership at Computerworld's *Premier 100 IT Leaders Conference last week. During a separate interview, he reflected on his nine months in the Massachusetts hot seat. Excerpts follow:*

What did you find most bothersome about what Microsoft did in its lobbying efforts against the state's ODF policy? This was the first time I had ever seen a vendor involved in efforts to recharter the central IT agency, and I find that troubling.

Did your experience sour you on Microsoft? I think, to be entirely fair, that large corporations have many personalities, all at the same time, and I do think that there are individuals of character that I worked through a year with.

There is this whole theater of me keeping Brian Burke, [Microsoft's Northeast] government affairs specialist, out of my office. That was theater for saying that this type of activity must stop. What I'm concerned about with Microsoft is just that there are portions of the organization, and possibly very endorsed portions of the organization, that have lost a sense of right relation with governments and with government customers.

If you could say anything to Steve Ballmer or Bill Gates right now, what would you tell them? Ray Ozzie, by agreeing to meet early in my tenure, let me say many of those things to him, and I felt very much that he heard. [*Editor's note: Ozzie, then one of Microsoft's chief technical officers, is now the company's chief software architect.*]

But what I would say is that for a good portion of my career, I've loved Microsoft. I've done great things with Microsoft. . . . In no way, sense or form am I anti-Microsoft. I am, however, against the overstepping of influence with government customers, and I feel that there's been a loss of connection between government as purchaser and Microsoft as innovator. And it would be good for everyone to reestablish that connection.

When you look back on your tenure as CIO, do you have any regrets? It was one of the more painful career experiences that I've had, and I've done hard stuff. I've done two what I would call significant turnarounds. You walk into them, you know it's going to be rough – and that's part of the attraction of trying to tackle them. Walking into this last year, it wasn't like a turnaround. [But] I knew it was going to be rough. I felt like it needed to be done. And it was rough, and now it's over. And there's kind of a bittersweet [feeling] to that.

Did it feel like a war in some ways? I certainly saw it as a deep threat to things that I care about: the ability of government to act as an independent purchaser, and the ability of a government purchasing agency to not be intimidated by aggrieved vendors.

And it was deep with conflict. [But] I have a nephew who's an Army intelligence officer in Iraq right now, and my cousin's son was an Army Ranger who was badly hurt in Iraq. So I'm careful [about using] the *war* word.

There certainly was an intense and draining struggle. Yes. What can be draining is not understanding why. It's being perplexed as to why an American corporation would be behaving this way with an American state. It's being perplexed as to why people can't sit around the table and resolve the issues in a more rational and productive way.

Now that you've had some distance, have you been able to come up with any answers to those perplexing questions? I have not, even four months out, felt like I've come to some new answers or different intellectual resolution of what happened. I'm just left with a sense that some struggles are worth having, and it's through those struggles that our society moves issues forward. Sometimes they're not pleasant, but it's the struggle that tests concepts. It tests governance mechanisms.

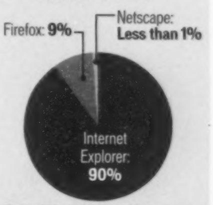
Do you have any regrets about resigning when you did? There are things I regret and things I don't regret. Last year was about, in a way, me using my reputation to defend the agency. And the last act of that was using my reputation and resignation to publicly highlight the funding shortfall issue. So I don't regret having done that, because I do think the issue needed highlighting. In all candor, it is painful for any CIO to resign, much less resign publicly, and that's the cost of the choices. But I would make the same choices.

Do you have a sense of pride about what you did? I've always wanted to have been the kind of character my father was: a longtime school administrator, straight as an arrow, decent, a strong-backboned individual. And I remain of the sense that I did a right thing, and did it in a way that I would hope he would have been proud of. As I used the word earlier, it's a very bittersweet pride. It's a pride almost in defeat. But it is pride nonetheless. I would do it over again. ▸

Taking the Pulse of IT

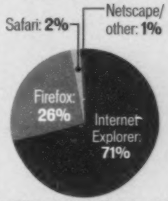
During the Premier 100 conference, *Computerworld* used electronic polling devices to query audience members on a variety of IT topics. Here is a sampling of the questions that were asked:

What is your primary browser at work?



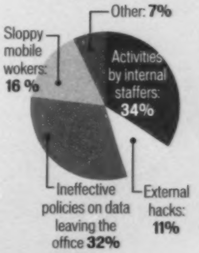
Base: 220 respondents. Netscape received one vote; Safari and Opera both got zero. Percentages add up to less than 100 because of rounding.

What is your favorite browser at home?



Base: 211 respondents. Netscape and "other" each received one vote; Opera got zero.

What is the single largest source of security breaches at your organization?



Base: 161 respondents

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_INFRASTRUCTURE LOG

_DAY 25: Our ad hoc security solutions are out of control. They're too difficult to manage. We're leaving ourselves vulnerable and exposed.

_Gil's had a security epiphany: high-powered lasers. They're everywhere. I keep zapping myself as I type.

_DAY 26: I've taken back control with the IBM System z™ mainframe. It helps us centralize our security management. Identity and access controls help protect our information from internal and external threats. And the System z's multilevel security features—along with its integrated hardware encryption—give us the highest levels of protection for our data and transactions.

_That's great. But it won't bring back my left sideburn.

IBM.COM/**TAKEBACKCONTROL**/Z

BRIEFS

DHS Warns of Citrix Software Flaw

The U.S. Department of Homeland Security has warned of a bug in Citrix Systems Inc.'s Presentation Server Client that could leave users open to attack from malicious Web sites. Security firm Secunia APS said the bug is "highly critical" because of its wide distribution and ease of exploitation. Citrix suggests that users upgrade to Version 10.0 of the client to fix the problem.

EMC Exec Named CEO of McAfee

Former EMC Corp. executive Dave DeWalt was named president and CEO of security software maker McAfee Inc. DeWalt, former executive vice president and president of customer operations at EMC, takes the helm of a company tainted by allegations of backdating of stock options. DeWalt succeeds David Fuller, who had been McAfee's interim president and CEO since the October 2006 resignations of George Samenuk as CEO and Kevin Weiss as president.

Mozilla Issues Fix For Firefox Flaw

The Mozilla Foundation has published a fix for a "critical" JavaScript vulnerability in the Firefox browser and the SeaMonkey application suite. The fix targets Firefox Versions 2.0.0.2 and 1.5.0.10 and SeaMonkey Versions 1.1.1 and 1.0.8. The vulnerability allowed uniform resource identifiers in image tags to be executed even if JavaScript had been disabled in program preferences.

High Court Rejects Ebbers' Appeal

The U.S. Supreme Court has turned down an appeal by Bernard Ebbers, forcing the former WorldCom CEO to serve out his 25-year sentence. The court rejected the appeal without comment. Ebbers contended that he didn't have a fair trial because potential defense witnesses weren't offered immunity like prosecution witnesses were.

ON THE MARK

HOT TECHNOLOGY TRENDS, NEW PRODUCT NEWS AND INDUSTRY BUZZ BY MARK HALL

You MUST COMPLY... RESISTANCE IS FUTILE...
SECURITY
AT LEAST I'M NOT JUST A NUMBER IN THIS COMPANY.
Me
Me
Me
Me
Me

MATTHEW FAULKNER

You're Not a Number . . .

. . . you're a cube. Back in 1967, the television series *The Prisoner* revolved around a captured spy whose life — past and present — was reduced to a number. In the title character's case, it was Number Six. SailPoint Technologies Inc. in Austin goes beyond numbers to what it calls Identity Cubes. Shipping later this month, the company's new Compliance IQ software generates Identity Cubes — one for each employee — which are meant to reduce risk within your organization. SailPoint's idea is to combine a person's work history and application access rights with the granular details of each application's functions. According to CEO Mark McClain, Compliance IQ creates a risk score that dictates whether an employee is allowed to perform an action inside a given application. The score is determined by factoring in data such as the last time the employee was certified on access privileges or whether he's on probation. Naturally, you set the policies that go into determining a worker's Identity Cube score. Well, then, maybe you're a number after all. Pricing starts at $150,000.

Improved identity management boosts IT security, McCLAIN argues.

Similarly, Q1 Labs Inc. in Waltham, Mass., next week intends to update its QRadar 3100 appliance software "to weave in the history of user identity" to help manage access rights, says Chief Operating Officer Brendan Hannigan. He says the appliance sifts through aggregated data from various monitoring tools on your network and ties it with identity data to determine access rights. The upgrade is able to track identity through virtual private networks, which often give users different IP addresses in separate sessions and make it difficult for traditional security tools to monitor end-user activity, Hannigan says. Pricing starts at $30,000.

Got a headache? Take 2 million . . .

. . . log calls and come up with a cure. That's what SupportSoft Inc. did. It analyzed about 2 million IT help desk calls from 20 large companies (average workforce: 75,000 employees). James Morehead, vice president of product management and marketing at the Redwood City, Calif.-based vendor, says the result is his company's Headache Index of the most common problems end users thrust upon IT support operations. Yes, password issues top the list, with 20% of all calls involving a variation on the phrase, "I forgot my password." While you've no doubt already automated the response to that one, other problems probably lack automated fixes. Morehead thinks you should consider help desk automation for any problem that accounts for 3% or more of all calls. Take e-mail issues, which came in fifth on the Headache Index, chalking up an 11% share of help desk calls. Morehead points to Outlook's OST (offline storage) file as one likely suspect. It's regularly overstuffed, which can cause Outlook to sputter and fail. Morehead notes that an automated fix is available from SupportSoft. And he says a lot of home PC users are contacting his company's recently unveiled consumer help desk site, *www.support.com*, to express frustration with Microsoft Corp.'s new Vista operating system. "We're learning now to help IT later," Morehead says. Of course, when you roll out Vista, you might want to keep a bottle of aspirin handy just in case.

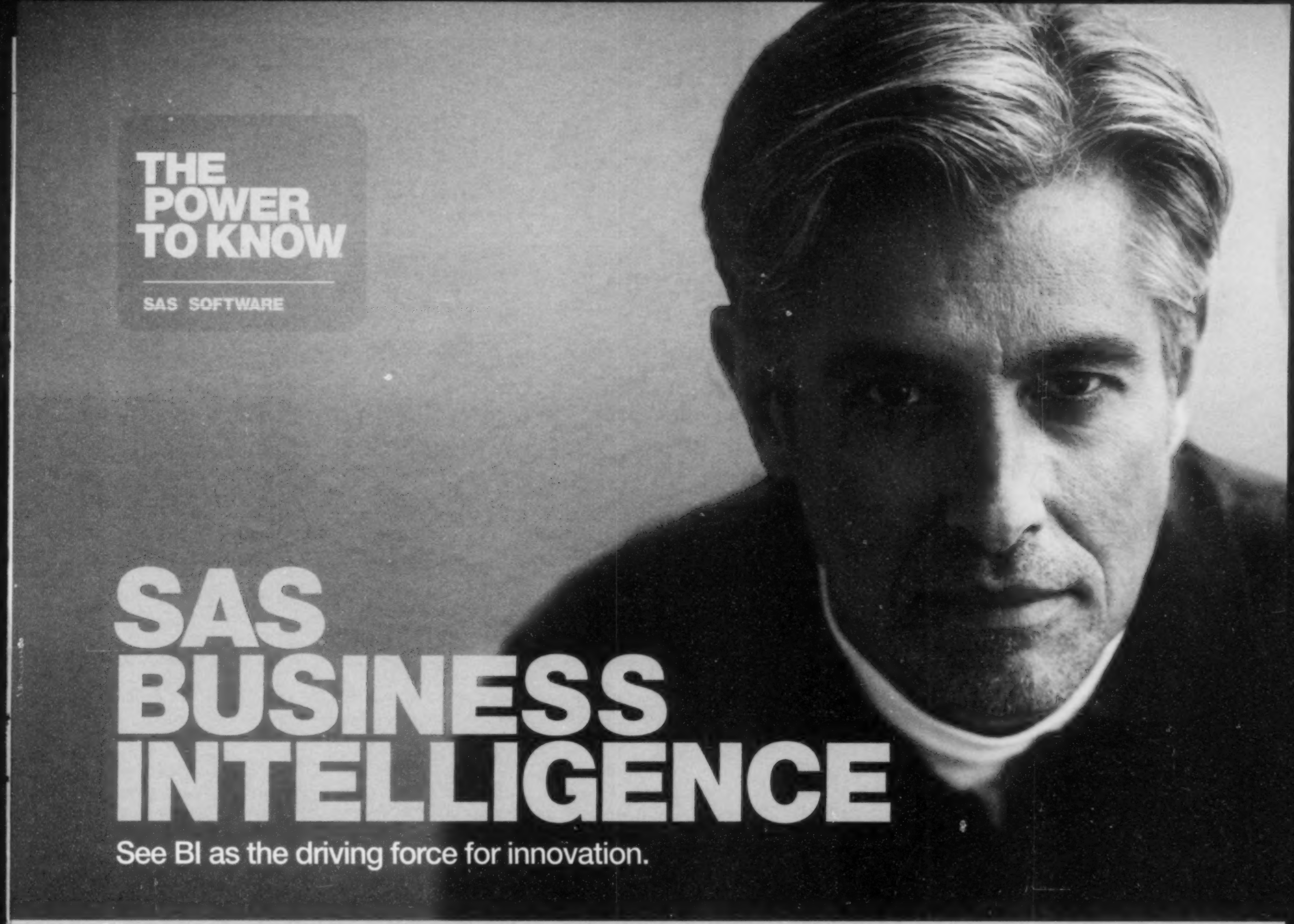
MOREHEAD: Eliminate major help desk pain through automation.

Virtual worlds need . . .

. . . real-world tools for security and monitoring. EMC Corp.'s VMware continues to expand its role in the data center. But just because your application environment has gone virtual, it doesn't mean your IT problems are any less real. Gregory Ness, vice president of corporate marketing at Blue Lane Technologies Inc. in Cupertino, Calif., argues that security holes caused by unpatched software on virtual machines are just as risky as any other. His company's new VirtualShield software, which acts as a virtual appliance on VMware, ensures that every connection to a VMware application stack meets the most current vendor-approved patch status. In other words, if a hacker was trying a buffer overflow exploit for which a patch was available, VirtualShield would correct the packets going to the server to meet the new patch standard, even if the app on the virtual machine hadn't been patched. (See "Skip Patch Tuesday Frenzy . . . " On the Mark, Feb. 26.) VirtualShield will be available this Thursday, with prices starting at $499.

Monitoring performance in a VMware world can be more complex than in a standard server environment, with multiple VMs running on a single host device "creating a highly interdependent ecosystem," says Daniel Heimlich, vice president of marketing at Reston, Va.-based Netuitive Inc. He says one flaky VM could affect the performance of all VMs. What to do? The company will ship its Netuitive SI for VMware on March 30. Heimlich claims that the software self-learns its virtual infrastructure, the application stack, real-time performance characteristics and other factors, without installing any agents, defining rules, writing scripts or setting thresholds. Netuitive's software, which runs on an external server while monitoring VMware, can predict performance problems at least two hours in advance, according to Heimlich. Pricing starts at $5,000. ▸

$15B
IDC's projection of the virtual server market in 2009.


THE POWER TO KNOW
SAS SOFTWARE
SAS BUSINESS INTELLIGENCE
See BI as the driving force for innovation.

ENTERPRISE INTELLIGENCE PLATFORM
DATA INTEGRATION
INTELLIGENCE STORAGE
BUSINESS INTELLIGENCE
ANALYTICS

Imagine BI quickly integrated into any existing environment – freeing you to focus on strategic business projects. SAS gives you fast, easy access to multiple data sources, consistent and credible reporting, simple deployment of data across your organization, and accurate insights – for collaborative decision making among users at all skill levels. And SAS eliminates the need to maintain data, security and metadata in several places and formats. Providing reliable results that can be shared quickly to ensure that IT inspires business innovation. More than 4 million users at 40,000 locations around the globe rely on SAS to get better answers, faster, that drive performance.

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Microsoft to Add Office Link To Its Dynamics ERP Apps

BY MARC L. SONGINI

MICROSOFT CORP. today is set to introduce a new tool that it says will let end users more easily access Dynamics ERP applications from its desktop software.

Officials said the company plans to unveil the new Dynamics Client tool, which will link 12 Microsoft self-service ERP products to Microsoft Office and SharePoint Server applications, at its Convergence 2007 user event in San Diego.

Microsoft said the offering reduces the need to train Office and SharePoint users to run its ERP software.

James Utzschneider, general manager of Dynamics marketing at Microsoft, also noted that Dynamics Client will allow users to access back-end ERP data without having to buy a full software license.

Greater ERP Benefit

Nick Garbidakis, chief technology officer of the American Bible Society in New York, said that Dynamics Client has the potential to significantly extend the benefit of an ERP system.

He noted that the tool could save money on software purchases and allow end users to access back-end corporate data without special training.

Microsoft said it also plans to bring out new ERP implementation and migration tools, a new configurable interface and several updated Dynamics ERP applications during the conference.

Utzschneider said Dynamics Sure Step, the set of ERP implementation and migration tools and processes, will help customers more efficiently roll out the Dynamics software.

The new role-based user interface can be tailored according to an employee's position — such as a financial or manufacturing post — within a company, Utzschneider said.

The biggest challenge in a customer relationship management or ERP application implementation is end-user adoption, noted Rob Bois, an analyst at Boston-based AMR Research Inc.

He said the new Client software should help users more quickly access customer and other related information without making them log into the full-blown CRM application.

Microsoft Dynamics Client for Microsoft Office and Windows SharePoint Services, which includes basic data access and collaboration capabilities, is priced at $195 per user.

Microsoft Dynamics Client for Microsoft Office and SharePoint Server, which includes an executive dashboard and enterprise search and role-based reporting capabilities, cost $395 per user.

The Dynamics Client will be available in May. ◗

Product Upgrades

At its Convergence user conference, Microsoft announced the following upgrades to its ERP software:

- **NAV 5.0**, with sales and procurement upgrades, is available now.
- **GP 10.0**, with a new Windows Vista interface, will ship in June.
- **SL 7**, which adds native .Net support, will also be available in June.

Continued from page 1

Texas House

Social Security numbers on each of the millions of pages of public records they maintain and then redact them.

Abbott's ruling caused an uproar among county clerks in the state, who were panicked at the prospect of being held criminally liable for actions they said were carried out as part of their normal business.

Many of them quickly shut down or severely restricted public access to court records and sought help from state legislators. "When we first saw the [attorney general's] opinion, we were just panicked. We were like, 'This couldn't be happening,' " said Janice Gray, district clerk for Coryell County and vice president of the County and District Clerks Association of Texas.

Dianne Wilson, county clerk for Fort Bend County, added that much of the personal information has been freely available for purchase and inspection at county offices for many years. "We have always held that we are the repository of the public record," Wilson said. "The public has the right to view and copy and purchase any public record. They have free access to it."

She noted that county clerks can't reject a document just because it contains confidential information. Nor can they alter a public record, she said. "We cannot tell you what to put in a document and what not to," Wilson said. "We don't read the documents; we don't know if there is a [Social Security number] in it or not. We are not the ones that put it in there."

As the criticism mounted, Abbott quickly abated the opinion for 60 days to let the legislature act on it. In a letter to Fort Bend County Attorney Roy Cordes, the attorney general acknowledged that "the real-world consequence [of the opinion] was a virtual halt to a tremendous amount of business and commerce in Texas."

Abbott's investigation of the issue was initiated after a 2005 inquiry from Fort Bend County about how its clerk was expected to deal with Social Security numbers listed on public records.

The legislation that was passed last week, sponsored by Rep. Jim Keffer of Eastland, allows county and district clerks to disclose "in the ordinary course of business" Social Security numbers contained in public records. The bill holds that such disclosure is not "official misconduct and does not subject the clerk to civil or criminal liability" under the state's privacy laws.

The measure also requires that Social Security numbers not be included in future public records filed with county governments, and it allows individuals to ask that their Social Security numbers be removed from existing public records. However, it is up to individuals to identify the documents from which the numbers must be redacted.

The passage of HB 2061 is likely to come as a disappointment to privacy advocates, who have long been concerned that many county governments are posting public records containing confidential personal information on the Internet without first redacting sensitive data. Many have noted that the list of the public documents posted on some county Web sites includes copies of property and tax records, motor vehicle information and court files.

Many of these documents include Social Security and driver's license numbers, bank account details and sometimes even protected health information, critics noted.

"Identity thieves all over the world must be celebrating today," said David Bloys, a retired private investigator who publishes a newsletter called "News for Public Officials" in Shallowater, Texas.

"This could have been avoided by simply telling the handful of Texas counties that were online to pull their Web sites offline," Bloys said. "It is the online records that threaten Texans, and the online counties that have put us all at risk." ◗

Critics: Clerks Can Easily Redact Personal Data From Web

SECURITY EXPERTS downplayed concerns by county clerks in Texas about the difficulty of redacting Social Security numbers from public records posted on government Web sites.

Some pointed to states like Florida, where county governments are already redacting public records as mandated by state law.

Late last year, Florida's Orange County completed an 18-month review of more than 30 million pages in more than 12 million public records for personal information such as Social Security numbers, bank account information and credit card numbers.

In the end, 777,635 pages – 2.6% of the total reviewed – were found to have personal data that needed to be redacted.

"Right now, what you have is a lot of these counties [in Texas] running down to the state legislature and trying to scare them," said Peter MacKoul, president of HIPAA Solutions LC, a Sugar Land, Texas-based consulting firm.

"They want legislators to write a law running against the [attorney general's] opinion. What they are saying is that it is too difficult to comply with the AG's ruling," according to MacKoul.

Janice Gray, district clerk for Coryell County and vice president of the County and District Clerks Association of Texas, contended that eliminating Social Security numbers from the records would be a monumental task.

The county clerks would have to go through millions of pages to identify records containing the numbers, make copies of the pages and then block out the numbers on each copy, Gray said.

"You are talking about extra paper, extra storage and extra manpower" to do it, she said.

– JAIKUMAR VIJAYAN

100 PREMIER

IT LEADERS 2007

2007 Award Winners

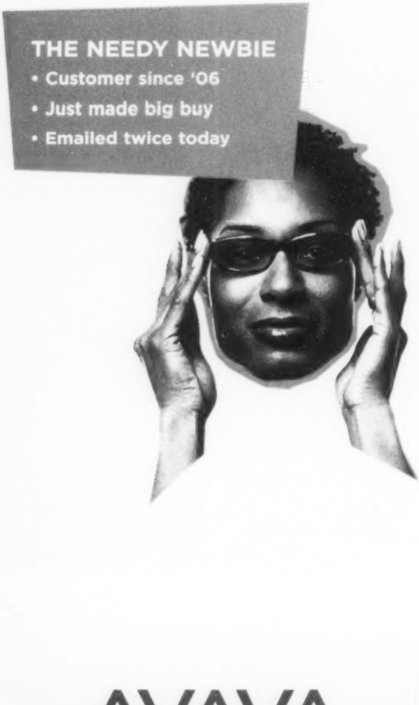
BEST IN CLASS

Ten innovative projects. Ten IT leaders. This year's best of the Premier 100 maximized information sharing with projects that offered convenience for customers, comfort for cancer patients or tough luck for criminals.

An editorial supplement to
COMPUTERWORLD
MARCH 12, 2007

TWO OF YOUR CUSTOMERS HAVE BEEN ON HOLD FOR TWENTY SECONDS

Q: WHO DO YOU HELP FIRST?



THE NEEDY NEWBIE
- Customer since '06
- Just made big buy
- Emailed twice today

THE LOYAL GABBER
- Customer since '96
- Average call: 17 mins
- Laughs at his own jokes

A: BOTH

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2007 Award Winners

FULL STRENGTH

IT budgets might be lighter and staffs leaner, but what never diminishes is the collective brainpower of an IT team put to the task. Couple that strength with the vision of a true IT leader, and the resulting organization can move mountains. Many of this year's 10 Best in Class award winners used that mental force to bring about innovations in information sharing.

Ellen Fanning is special projects editor at *Computerworld*. You can contact her at **ellen_fanning@computerworld.com**.

On the streets of New York, for example, detectives now have more than 120 million criminal and arrest records at their disposal as part of the Real-Time Crime Center, thanks to the efforts of the IT team under CIO James Onalfo. The mayor cited the combined data warehouse and crime analysis tools as a factor in the New York City Police Department's ability to solve 74% of all murders and shootings that took place in the city during 2005.

At The University of Texas M.D. Anderson Cancer Center, under the leadership of CIO Dr. Lynn Vogel, the IT team developed a Web services-based electronic medical records system that coordinates patient care by bringing clinical and research data, along with medical images, to bedside PCs. The system has also enabled research collaboration that might someday lead to advances in cancer treatment.

Sharing information is great, but first you have to get at it. At the Michigan Department of Information Technology, creating an integrated data warehouse that helped detect $8.7 million in public assistance fraud last year meant breaking down cross-organizational information silos. And at the U.S. Government Accountability Office, building a Web portal to coordinate disaster-relief efforts meant gathering information from 13 mission teams and multiple government agencies.

Now in its sixth year, *Computerworld*'s Best in Class awards program honors IT leaders who bring projects like these to fruition. These honorees are a subset of the 2007 Premier 100 IT honorees who are being recognized for helping their organizations achieve goals through technology innovation. To select this year's 10 winners, a panel of judges and *Computerworld* editors evaluated dozens of candidates (see page 19). We looked for projects with measurable payback, strategic importance to the business, customer impact and new revenue or cost savings.

We hope you'll pick up a few ideas here and that these stories will serve as a reminder that IT innovation is all about finding new ways to bring people and information together. ▸

100 PREMIER IT LEADERS 2007 BEST IN CLASS

4 Underwater Web Despite the crowds, Georgia Aquarium's visitors rarely wait in line to see exhibits, thanks to its Web-based reservation and ticketing systems.

8 Paper Erasers The U.S. Maritime Administration uses its automated procurement system to make 25,000 purchases online every year, with no harm to trees.

9 Global Assembly Information sharing took a giant leap forward at Tata Consultancy, which used a set of collaboration tools plus VoIP to cut travel costs by 40% and telephony costs by 60%.

10 Synchronized Stock Many acquisitions later, apparel giant VF Corp. runs a best-of-breed supply chain that has reduced planning cycle times by 75% and increased customer service by 15%.

11 Cure Collaboration The University of Texas M.D. Anderson Cancer Center improved patient care with an electronic medical records system that brings a patient's clinical and research data to bedside PCs.

12 Auction Block Auction house Bonhams 1793 developed a comprehensive auction management system that combines the functions of ERP, CRM, auction catalog production and more.

13 Desktop Drop Via a Web portal, Wells Fargo business customers can now make deposits from their desktops, saving the bank and its customers time and money.

16 Case Crackers The New York City Police Department's online database, which houses more than 120 million criminal and arrest records, has been used by detectives to work on more than 3,500 cases thus far.

17 Fraudbusters Michigan's IT department integrated data from multiple repositories into a single data warehouse, helping investigators identify $8.7 million in fraud last year.

18 Instant IT The GAO's Hurricane Central portal coordinates the efforts of 13 mission teams specializing in areas as diverse as banking, public health and flood control.

19 The Judges

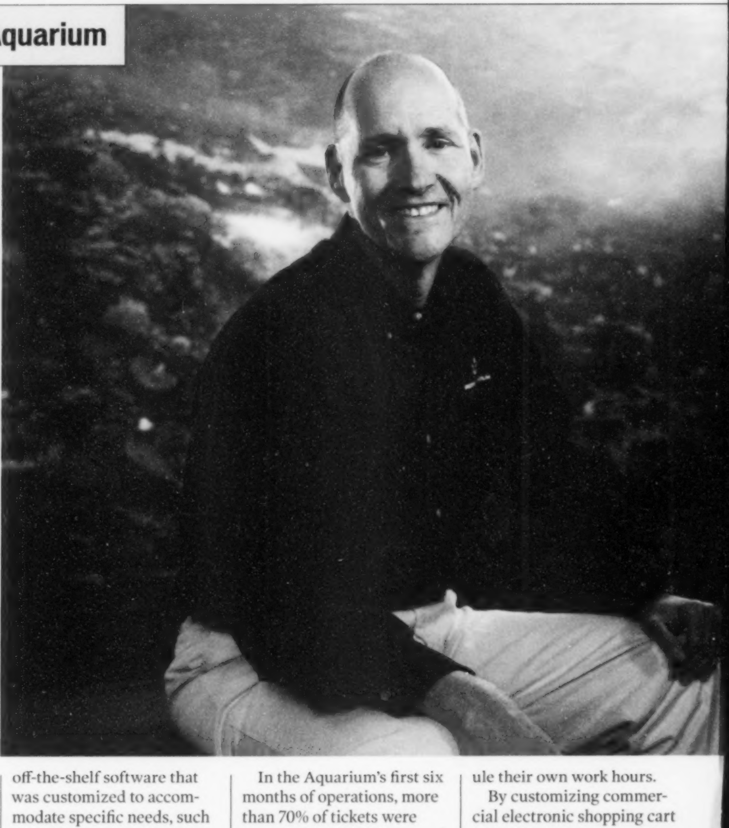
UNDERWATER

2007 Award Winner

Georgia Aquarium

No lines, no waiting with the Georgia Aquarium's Web-based reservation and ticketing system.

By Julia King



GREG CAMPBELL

VISITORS from around the world come to the Georgia Aquarium to see Beluga whales, piranhas, California sea lions, rare whale sharks from Asia and even African black-footed penguins. But despite the crowds, rarely do visitors wait in line to see these exhibits, thanks to the aquarium's Web-based reservation and ticketing systems.

There's also no waiting to apply for a job, volunteer time and services, make a financial donation or book trips for school groups. Every one of these tasks is handled online via the aquarium's Web site, which functions as the primary connection between the aquarium, which is the world's largest, and its various sets of patrons.

Developed primarily from off-the-shelf software that was customized to accommodate specific needs, such as online fundraising, the Web site also functions as the aquarium's administrative heart and soul.

In the Aquarium's first six months of operations, more than 70% of tickets were purchased online. Personnel also managed nearly 1,000 volunteers via the Web site, which lets volunteers schedule their own work hours.

By customizing commercial electronic shopping cart software, the aquarium also created an online donation system that has processed more than $2 million from

WEB

"We were successful in eliminating lines to get into the aquarium," says Beach Clark, vice president of IT at the Georgia Aquarium.

40,000-plus donors.

"We're a relatively small business, so we have to stay pretty much with off-the-shelf software packages," explains Beach Clark, vice president of information technology at the nonprofit aquarium. "That said, we have seen some pretty significant advantages by either customizing or integrating that software."

For example, with an integrated online reservation and on-site ticketing system, Clark says, the aquarium is able to manage foot traffic through the 550,000-square-foot building.

"From an operations standpoint, if people can make a reservation and print out tickets at home online, then we could avoid problems that many other aquariums had where everyone showed up at the same time and had to stand in line," Clark says. "We were successful in eliminating lines to get into the aquarium."

With online reservations and by issuing time-stamped admission tickets, "we're also able to manage the capacity of the building so that it stays full," he adds.

From the beginning, "we knew that a successful advanced-reservation system would be critical to managing the record crowds we expected at the aquarium," says Clark. Since it opened in November 2005, the aquarium has hosted more than 2 million visitors.

Still, the Web site's performance and value have far surpassed all expectations, says Jeff Swanagan, Georgia Aquarium's CEO.

Across all aquariums and zoos in the U.S., the previous high for tickets sold online was between 8% and 10% of all sales, Swanagan notes.

"Initially, our numbers were 90% [of tickets sold online]. That has fallen somewhat, to around 60%, but wow, we had never expected it would be this powerful," he says. "As managers, it enables us to plan ahead — how much staff we'll need, how much food we'll need and how we can help guests prepare for their trip."

Clark explains that online ticket sales were especially high in the beginning because visitors were more cognizant that a brand-new aquarium would attract a lot of people, which would translate into long ticket lines. They were able to circumvent the lines by going to the Web.

Now that the aquarium has been open for a year, visitors, anticipating that lines might be shorter, might not feel the need to buy tickets online, Clark speculates.

Across all aquaria and zoos in the U.S., the previous high for tickets sold online was between 8% and 10% of all sales; Georgia Aquarium's initial online ticket sales reached 90%.

From a technical standpoint, none of the applications used by the aquarium's Web site is especially complex, Clark notes. What is innovative about the implementation is how the applications are customized and integrated — work that was completed by a multiparty team of service providers, including Accenture Ltd. and Spunlogic, an Atlanta-based marketing and technology firm.

The biggest technical challenge was the real-time integration between the Web shopping-cart software and online ticketing, Clark says. "The Web shopping cart was great for products, but it didn't have the capability to collect date and time information, so we had to customize the package for that," he says.

The team created an XML-based interface to link the two packages.

A second integration challenge involved customizing a Microsoft SharePoint document library that houses job applications so that it could be accessed by the outside service provider that scores candidates' submissions. This, too, was done via an XML-based interface.

Enhancements are ongoing. Just recently, the aquarium began offering a feature that lets users download information about all of its various galleries and exhibits from the Web site to their iPods so they can listen to a free personal audio tour when they visit.

"All zoos and aquaria are aggressively adopting the Internet, not just for marketing but [also] for increasing and enhancing the overall experience of their facilities," says Dennis Kelly, president and CEO of Zoo Atlanta. "I'd say the Georgia Aquarium is at the forefront of utilizing the Web to present a very engaging, customer-friendly front door to their facility."

Looking ahead, Clark says, the aquarium is aiming to enhance the Web site further so that it can better market to tour operators and local businesses. Among other things, the aquarium wants to partner with other local attractions, including the Atlanta Fulton County Zoo and the World of Coke, to offer tour packages.

"The Web site is a very big priority for us," Swanagan says. "Everything we do, we want to put on the Web site first." ▸

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PAPER ERASERS

Online procurement eliminates paper waste at a federal government agency.

2007 Award Winner

U.S. Maritime Administration

By Gary Anthes

CIO Donna Seymour

CHRIS HARTLOVE

Twelve years ago, Congress passed a law called the Paperwork Reduction Act, whose purpose was to "minimize the paperwork burden" on the government and those who do business with it. But paper didn't quite disappear from Washington, as anyone who has bid on a government contract can tell you.

Still, a few brave public servants have taken a stand against the flood of paper, and Donna Seymour is one of them. As CIO at the U.S. Maritime Administration, she led the development of the Virtual Office of Acquisition (VOA), where 25,000 purchases are now made each year — with no harm to trees.

The Maritime Administration recently managed its largest procurement ever, awarding a $2 billion contract for management services for 70 Ready Reserve ships. "We did the entire process online, never exchanging a single piece of paper," says Iris Cooper, who, as director of acquisitions, is the chief VOA user at the agency. "When we did the same acquisition five years ago, we produced 1 million pieces of paper."

And, says Cooper, the VOA enabled her to enlist the help of bid evaluators in Norfolk, Va., and New Orleans, something that wasn't practical in a paper-driven world.

Seymour says the VOA saved the agency $250,000 in direct labor on the evaluation phase of just one acquisition, and it's on track to cut the time spent on acquisitions by 50%. The vendors that bid on jobs enjoy similar savings, she says.

The VOA is built on EMC Corp.'s Documentum enterprise content management software, which is integrated with a pre-existing U.S. Department of Transportation contract-writing system. VOA uses a Documentum workflow, online forms and automatic XML tagging. It automates much of the multistep bid and proposal process, from bid solicitation through award notification and contract administration.

Seymour says she and Cooper brought some basic ideas for VOA to the Maritime Administration from earlier jobs at the Defense Department. "It was kind of kismet," Seymour says. "We really just jelled right away. We had the same vision."

Seymour says she faced two challenges as manager of VOA development. One was to supplement her staff of four IT workers, which she did by hiring a contractor. The other was to manage user expectations and shifting requirements through a process of rapid prototyping.

"We found that an iterative joint application development approach — listen, prototype, demo, listen some more, refine, listen, demo — worked best," she says. "We were very flexible in design and development but a little more rigid in the testing and deployment phases."

Seymour says the Defense Department is pretty far along in automating procurement. "But I think we are certainly in the forefront of civilian agencies," she says. Other Transportation Department agencies are considering adopting the VOA, she notes.

Cooper says of Seymour, "She got it from the first minute, what I was looking for. She is very adaptable, and she clearly understands the acquisition process. And she empowers her people — she gives them the overall strategy and says, 'Here's what I want.' " ◆

2007 Award Winner

Tata Consultancy Services

GLOBAL ASSEMBLY

Tata Consultancy connects employees in 35 countries using voice over IP.

By Thomas Hoffman

In late 2003, Tata Consultancy Services Ltd.'s CEO, S. Ramadorai, had a simple but ambitious goal for the Mumbai, India-based company: Improve communication and collaboration among all employees.

It wouldn't be an easy task. With nearly 80,000 employees in 35 countries, Ramadorai wanted to see more real-time collaboration and information sharing among workers in different time zones who come from disparate cultures and whose clients are in different vertical industries.

Even though TCS's CEO was a key supporter of the project, "the biggest challenge for me was to show my business peers the overall benefits of the project," says Chief Technology Officer K. Ananth Krishnan.

Development began in 2004, but the biggest payoffs wouldn't be visible until mid-2005, says Krishnan. "So it was a leap of faith for our senior leadership team" to buy into the project, he adds. "I had to sell this pretty much on my own reputation."

The initiative, known as Project Infinity, involves a multitude of technologies — including IBM's Sametime, QuickPlace and Lotus Domino collaboration tools — but the key component is a global voice-over-IP telephony network provided by Avaya Inc.

The VoIP network serves as the backbone for the collaboration push. With it, TCS technologists who support customers in vertical industries such as retail, energy and financial services can share and reuse common code "snippets," says Krishnan.

The VoIP network has also enabled TCS to reduce its travel and telephony costs, because the system supports videoconferencing among associates in far-flung offices. In fact, over the past year, TCS has reduced its domestic and international travel costs by 40% while slashing its telecommunications costs by 60%.

Still, getting employees to use the VoIP network and achieving those savings wasn't easy. For instance, when TCS's IT organization first began promoting the idea of using videoconferencing to connect with colleagues, some employees insisted that they needed to travel to discuss business or project issues in depth, and others said they were concerned that some problems couldn't be resolved via video, says Anuva Pardesi, head of branding for TCS's innovation group.

"We told them as part of their travel requests that it was mandatory for them to explain why videoconferencing wouldn't be enough to satisfy their requirements," says Pardesi. "So consequently, we were able to track costs on travel and improve usage of videoconferencing." It helped that TCS's CFO, S. Mahalingam, stood firmly behind the mandate to justify travel, she says.

CTO K. ANANTH KRISHNAN

Project Infinity team leaders also expected that once IP-based phones came out, adoption rates "would take off," says Christopher Hudson, a principal consultant who ran the TCS project management office. But as it turned out, many employees didn't want to abandon their existing phones, he adds.

To help encourage adoption of the VoIP telephony network, including the IP-based phones, Pardesi and other project members put together marketing campaigns to explain why using the new phones was easier, faster and cheaper than using traditional phones, which typically require a code to be entered before an employee can access an outside line, she says.

The campaigns included a "user of the month" contest, spotlighting the employee who racked up the most IP phone minutes for a particular period.

Pardesi and her group also came up with a contest for employees to name the VoIP network. The winner was awarded 5,000 rupees (about $113 U.S.), says Pardesi.

There was some initial excitement among users about the VoIP network, "but it didn't peak," says Pardesi. "So we had to go back to the drawing board to determine how to sustain interest. We realized we needed to get this message out very clearly and to repeat this message consistently until it caught on." ▸

> *"It was a leap of faith for our senior leadership team."*
>
> **K. ANANTH KRISHNAN**, CTO, TATA CONSULTANCY SERVICES LTD.

SYNCHRONIZED STOCK

Many acquisitions later, apparel giant VF runs a best-of-breed supply chain.

By Jennifer McAdams

2007 Award Winner

VF Corp.

Catering to more than just cowboys with its signature Lee and Wrangler jeanswear lines, VF Corp. has become a "lifestyle" apparel company by acquiring brands tailored to surfers, skateboarders, outdoor enthusiasts and others. Supply chain management has helped this manufacturer change its image and overhaul its factory operations and sourcing channels.

Greensboro, N.C.-based VF has been around for more than a century and is one of the world's largest apparel makers. When VF first went into acquisition mode several years ago, officials decided to consolidate administrative functions by adopting a best-of-breed approach in which it routinely discontinues the use of many systems from the companies it absorbs. At the same time, an overarching supply chain management system now stretches across VF's many divisions.

Having grown to gargantuan size, VF is determined to make the most of volume purchases, locate the best facilities in which to make particular products and quickly move inventory. VF takes in $7 billion in sales annually. It churns out more than 800,000 SKUs — ID numbers used for each backpack, pair of shoes or jeans that it makes and ships to about 47,000 retailers. Production relies on more than 1,600 factories, over 100 fabric wholesalers and nearly 3,000 trim suppliers.

Vice President of Supply Chain Systems Ellen Martin

ROGER BALL

"When you start to track all of these numbers and think about managing a supply chain of this size, it is just mind-boggling," says Ellen Martin, vice president of supply chain systems at VF.

To identify and keep up with customers shopping for both new and traditional VF brands, IT officials are forever grooming the supply chain system, which is based on i2 Technologies Inc.'s Supply Chain Planner Versions 6.1 and 6.2. VF partnered with i2 in the late 1990s, initially using SCP 3.8.

In some cases, SCP helps VF to reduce risk, but it also helps the company to take chances on new ventures. "Humans have a real habit of getting into habits. Because a color was once popular, there is a tendency to stay with it, even though demand has gone down. SCP doesn't have any habits," says Martin.

VF worked with i2 to ensure that SCP could run all components of its manufacturing resource planning system in a nightly batch window. The process takes about three hours, starting with data feeds to the software engine and ending with the export of planning and procurement answers.

Optimizing SCP for each major business line, however, isn't without its challenges, says Will Shiver, senior project lead in VF's forecasting and planning area. "Even though SCP is a common system within VF, our individual business units — we call them coalitions — are very diverse. Each one has offered unique opportunities for customized solutions," he says.

Unlike VF, many companies fail to make supply chain management an integral part of consolidations or mergers and acquisitions, says Mark Hillman, a supply chain analyst at AMR Research Inc.

"Companies are not necessarily looking for supply chain efficiencies and opportunities to consolidate the number of suppliers in their base," he says.

Using a supply chain system is essential for planning internal operations and addressing the needs of major suppliers. "Our system helps us plan for base items — the products we need month after month — and optimize production of those products to keep the capacity of the sewing floor steady," says Martin. "We don't want to have spikes one day and send workers home the next."

VF has worked with i2 to develop a system called Material and Asset Planner, or MAP Solver. This module lets business unit leaders determine how to maximize volume discounts while keeping in mind options for producing a particular item.

"In the end, it comes down to a passion for this business," Martin says. "We are passionate about VF, passionate about our customers and even passionate about the software we use." ▸

McAdams is a freelance writer in Vienna, Va. Contact her at JMTechWriter@aol.com.

CURE COLLABORATION

2007 Award Winner

The University of Texas M.D. Anderson Cancer Center

Patient data is streamlined at this national cancer research center.

By Stacy Collett

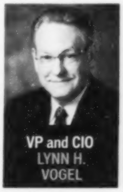
Half of all families who have endured some form of cancer say they experienced problems related to coordinating care during the course of treatment. One in five participants in a November 2006 survey said they received duplicate tests or diagnostic procedures, or said they were confused about medications their doctors prescribed. Others reported that medical records didn't reach a doctor's office in time for an appointment.

"Clearly, a top priority for improving cancer care in this country is fixing this problem," says Robert J. Blendon, professor of health policy and political analysis at the Harvard School of Public Heath, which authored the study of 930 adults affected by cancer in partnership with the Kaiser Family Foundation and *USA Today.*

With the help of his IT staff, Lynn H. Vogel, vice president and CIO at The University of Texas M.D. Anderson Cancer Center in Houston, is making great strides in coordinating patient care with a Web-services-based electronic medical records (EMR) system that brings a patient's clinical and research data, as well as medical images, to bedside PCs.

"In cancer [treatment], the worlds of research and clinical care are so closely tied together," Vogel says. "Our philosophy is that every piece of data that our patient generates, whether it's research data or clinical data, should be part of their EMR."

What makes the system unique is its service-oriented architecture (SOA), which allows more than a dozen departments to use their own best-of-breed processes and software. Each program is wrapped with a services layer, and they collectively form a "virtual data repository" that is accessible to clinicians for viewing or interactive use.


VP and CIO
LYNN H.
VOGEL

The center's first EMR project, ClinicStation, integrates a clinician's access to both images and clinical data for each patient. On the research side, the Clinical Research Information Suite of applications includes an institutional tissue bank, a model for the collection of research data on patients and a data repository that has been built on a research data model for cancer research.

When the project began in 2000, no commercially available EMR system could combine both images and data, let alone do so in an SOA environment. That's largely still true today, says Deborah Kohn, principal at Dak Systems Consulting, a health care IT advisory firm in San Mateo, Calif.

"The vendors who are out there have been developing systems for years. These companies have invested millions in client/server technology, and tons of customers are totally invested in the technology," Kohn says. So existing vendors are unlikely to convert to an SOA, though many have added some Web features to their front ends, she adds.

Dr. Kevin McEnery, the visionary behind M.D. Anderson's EMR system, hatched the idea for an all-inclusive system in 2000 when he was an assistant professor of radiology.

"We were creating too much paper and couldn't keep up. So we began to look at a better way to present clinical information to the radiologist," says McEnery, who is now professor of radiology and deputy division head for informatics in the center's diagnostic imaging division. "Initially, it was just radiology reports. Then I decided that I also wanted, as a radiologist, lab data and clinical notes. So we obtained those from other systems. Clinicians began to ask for the same program in the hospital. So we began working with the central IT organization, and we made that happen in March 2001," with ClinicStation.

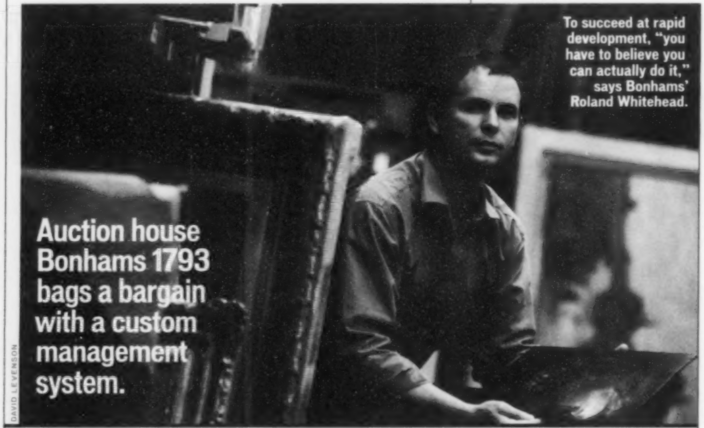
"We accessed the reports directly from the source system using Web services to initially get access to the data," says McEnery. "We've been able to expand that model to include 30 different sources of data that are currently being used by the system."

The next challenge was to ensure that the system was robust enough to handle an expanding user base, which quickly grew from several hundred to several thousand.

Vogel credits Chuck Suitor, director of EMR development and support, for envisioning early on a three-tiered architecture with multiple servers in the midtier. Today, the system routinely documents 3,000 concurrent users who look at 1.5 million electronic patient records each month.

"When they stop discovering new things about cancer or new ways to treat patients, maybe we'll have a stable environment," says Vogel. "Until then, things are changing almost constantly, and we will continue to change to keep up with it." ▪

Collett is a Computerworld *contributing writer. Contact her at stcollett@aol.com.*



To succeed at rapid development, "you have to believe you can actually do it," says Bonhams' Roland Whitehead.

Auction house Bonhams 1793 bags a bargain with a custom management system.

DAVID LEVENSON

AUCTION BLOCK

2007 Award Winner

Bonhams 1793 Ltd.

By Gary Anthes

Bonhams 1793 Ltd. is a distant third behind top auctioneers Christie's and Sotheby's. But it's catching up, thanks in part to an auction management system developed under the direction of CIO Roland Whitehead.

In developing the system, Whitehead bucked conventional wisdom, which says nobody in his right mind would develop a big, complex application from scratch when commercial packages are available off the shelf.

His secret? First, select software that can be tightly integrated and at the same time easily modified. Second, go for open-source software whenever possible. And third, adjust the attitudes of both developers and users.

In 2000, Bonhams, which is based in London and has operations in the U.S., embarked on a series of five acquisitions. After the first one, Whitehead was brought in and charged with evaluating and standardizing IT systems. The key was developing a custom, comprehensive auction management system that would combine the functions of ERP, customer relationship management, auction catalog production and more. The result was A3.

Bonhams' big competitors had chosen packages from SAP AG and Siebel Systems Inc., but Whitehead wouldn't go there. "You get packaged applications, and then you have to tailor them to your needs, but you also have to change your business too much for the tailored applications," he says. "We have proven that you can develop a system from scratch at significantly lower cost."

Whitehead selected database and development products from Progress Software Corp. He says the Bedford, Mass.-based vendor's OpenEdge application framework offered a unified environment of development tools, application servers and application management tools. It also provided an embedded database and hooks to connect to and integrate with other applications and data sources.

"In previous projects, I've chosen a database from a database vendor and a tool set from another vendor," says Whitehead. "But we wanted a development suite that was all in one."

Bonhams' developers used the tools and database to establish at the beginning of the project a development framework — a set of routines and procedures that could be easily modified and built upon. Screen formats and content were database-driven and could be changed without new code having to be written, Whitehead says.

"By careful planning of their architecture, they were able to [achieve] cost savings by deploying everything on IBM xSeries servers running Linux," says Robin Porter, business development manager at Repton Computer Products Ltd., an IT reseller in Hanworth, England. "Not many were brave enough to do this so early."

Whitehead's boldness extended to his choice of application software as well. "Everyone else in his situation would have done what everyone else does — buy an expensive ERP or CRM solution and hire expensive consultants to implement and tailor it," Porter says.

But the key to rapid development didn't lie solely in technology, Whitehead says. "It's primarily a matter of mind-set," he explains. "You have to believe that you can actually do it."

That meant boosting the IT staff's confidence. It also meant building the rest of the company's appreciation for IT people — "who traditionally had been fairly close to the bottom of the pile," Whitehead notes.

A3 enabled Bonhams to significantly reduce the ratio of overhead staff to revenue-producing staff, Whitehead says. "Our earnings staff were in the minority," he says, "but now they clearly are in the majority." ◆

DESKTOP DROP

2007 Award Winner

Wells Fargo & Co.

Customers sign on for cheaper, faster deposits.

By Robert L. Mitchell

Wells Fargo & Co.'s business customers aren't exactly laughing all the way to the bank, but they may be laughing in their offices. Steve Ellis wouldn't have it any other way. The executive vice president of the company's wholesale services group says that thanks to the bank's evolving Desktop Deposit application, more customers than ever are skipping regular trips to local branches. Instead, they're making deposits from their desktops by scanning paper checks through their PCs and uploading the images to the bank's Web portal.

The application, integrated with Wells Fargo's Commercial Electronic Office (CEO) portal, has been in operation for less than two years, but it already services 15% to 20% of all check deposits the bank receives. The process saves both Wells Fargo and its customers time and money. Desktop Deposit, says Ellis, is "the fastest single product ever adopted" by the bank's customers.

It has also made the bank more competitive by allowing it to offer deposit services in more locations in the U.S. and abroad without having to build local branches.

"It's enabled us to do borderless banking," says Stephanie Sturgis-Griffin, senior vice president of wholesale Internet solutions at Wells Fargo. The bank can also handle deposits from more locations for its business customers.

"[Customers] are able to consolidate their banking relationships across all of their offices because they no longer need to have a local branch," says Danny Peltz, executive vice president and head of wholesale Internet and treasury solutions.

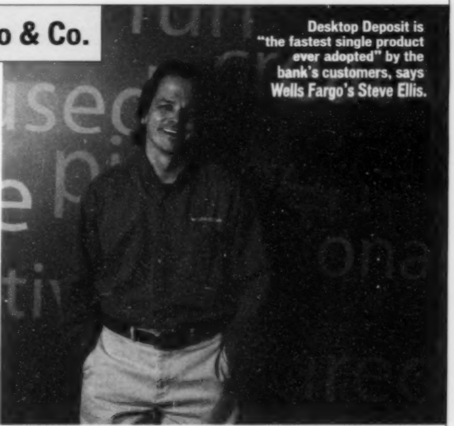
The bank's decision to switch gears after the application's initial introduction could be another reason for the product's success.

The first version required customers to install a "fat client" application and driver software for a scanner that plugged into a PC's USB port. Desktop Deposit now relies on a single ActiveX control within the user's browser that interfaces with the scanner. Customers use their browsers to access the application, which resides on the bank's BEA WebLogic servers. Written in J2EE, it offers users the same familiar look and feel as the CEO portal's other applications.

"It's a time-saver, and it gets your money in quick. There are no cons to this," says Julie Keegan, controller of Craig Hospital in Englewood, Colo. The system, which required 10 minutes of phone support to set up, extends the window for making the deposits and receiving same-day credit. And Keegan says it saves her staff three hours per week.

The thin-client architecture has given Wells Fargo the flexibility to make five subsequent revisions to the application without disrupting customers' configurations, and it should make upgrades to newer scanners easier as well.

"Thin client gives Wells total control over the remote-deposit capture application. This has typically been an issue with check [applications]," says Stessa Cohen, an analyst at Gartner Inc.



Desktop Deposit is "the fastest single product ever adopted" by the bank's customers, says Wells Fargo's Steve Ellis.

SETH AFFOUMADO

That flexibility has made it possible for the bank to quickly add several new features. It now allows businesses making deposits to associate other data, such as a customer ID, with each check. It also lets users scan in the remittance coupons that their customers send in with their payments.

Wells Fargo also added the ability to download and print receipts and PDF files containing the check images. Some customers use a downloadable Excel spreadsheet report feature — another improvement that customers requested — to directly update their receivables systems. That saves another step, says Sturgis-Griffin.

Wells Fargo's approach differs from that of most of its rivals, which have purchased remote deposit applications. That approach typically doesn't let banks integrate remote deposit tools tightly with their primary business banking portals or support thin clients.

This year, Wells Fargo plans to make the application available to its smaller business customers.

Sturgis-Griffin says she expects the same rapid uptake within that market, because "there's a sexiness to it that attracts customers to use the service." ◆

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I'M A SALES REP.
I KNOW YOU JUST SENT ME
AN URGENT EMAIL
BECAUSE I HEARD IT
ON MY CELL PHONE.

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CASE CRACKERS

2007 Award Winner

New York City Police Department

Instant access to 35 billion public records helps the NYPD fight crime.

By Thomas Hoffman

Last year, robbers held up an Italian restaurant in New York at gunpoint. The thieves were masked and fled without leaving many clues.

But one piece of information was enough for detectives to crack the case. Witnesses said one of the robbers had the word "sugar" tattooed on his neck. Using a new high-tech crime-solving system, New York City Police Department detectives entered the information into a database of tattooed criminals that helped them identify and arrest the suspect within hours.

NYPD detectives use the database as part of the Real Time Crime Center (RTCC), which was rolled out by the department in July 2005. The system houses more than 120 million criminal and arrest records and provides access to more than 35 billion public records. NYPD detectives have used the system to work on more than 3,500 cases so far, including so-called cold cases, which involve crimes that have remained unsolved.

Detectives recently used the system, along with customized crime analysis software, to track down a suspect in a 1988 murder who had moved to South Carolina, says James Onalfo, the NYPD's deputy commissioner and CIO.

NYPD CIO JAMES ONALFO

In May 2003, NYPD Commissioner Raymond Kelly hired Onalfo to oversee development of the RTCC. The project originated after Kelly asked IBM executives Lou Gerstner and Nick Donofrio to help the department implement technology that would allow detectives to use stored information more effectively to solve crimes.

IBM Global Services built the data warehouse using WebSphere, which utilizes IBM's DB2 universal database. Detectives can access information housed in a series of data marts using Cognos Series 7 PowerPlay technology, which enables rapid data mining and queries. In addition, Hauppauge, N.Y.-based systems integrator Dimension Data North America Inc. developed a set of forensic tools to help detectives analyze their cases.

The RTCC is not only considered state of the art among law enforcement agencies, but it also stands out among communities that are looking to create regional computer forensic crime labs that neighboring cities and federal and state law enforcement agencies can share, says Jeff Fischbach, president of SecondWave Information Systems, a Chatsworth, Calif.-based consultancy. With a regional crime center format, says Fischbach, "you can have local, state and federal law enforcement authorities working under the same roof."

For all the successes of the RTCC, the project team has had to overcome multiple obstacles to achieve them. For example, with such a massive volume of crime records, the team had to spend countless hours "scrubbing" the data to ensure that detectives would be working with the most accurate information possible, says Onalfo.

Another big problem was obtaining the $11 million in initial funding for the system from City Hall. And even after the RTCC project had been approved, "getting the authority to spend it is another huge task," says Onalfo. "You have to go through an arduous, time-consuming and meticulous Q&A process with the financial folks down at City Hall."

Before Onalfo became CIO, the department had been constrained in its efforts to apply technology to crime fighting by stovepiped systems throughout the department. "So the thinking at City Hall was, 'How are you going to do it now?' "

Onalfo managed to sell the merits of the project to New York's bean counters. Nevertheless, he's still trying to obtain approvals to move forward with the final phases of the project, including plans to attach DNA information to records. The crime center will be further aided when all 285 NYPD precincts are upgraded from 4MB Internet access to 100MB access, which is expected by August, says Onalfo.

> *NYPD CIO James Onalfo says previous efforts to apply technology to crime fighting were constrained. "So the thinking at City Hall was, 'How are you going to do it now?' "*

The crime center has generated impressive results. In February 2006, New York City Mayor Michael Bloomberg announced that 74% of all murders and shootings that took place in the city during 2005 had been solved, many with the help of the RTCC.

It helps that most of the 40 full-time detectives who staff the crime center are already computer savvy, notes Deputy Chief Joseph D'Amico, commanding officer of the RTCC. Computer knowledge among incoming law enforcement officials is on the rise nationally, according to Fischbach.

More bad news for the bad guys. ◆

FRAUDBUSTERS

2007 Award Winner

State of Michigan

Breaking up interagency data silos helps the state of Michigan catch cheaters.

By Robert L. Mitchell

Each year, the Michigan Department of Human Services (DHS) grants approximately $5 billion in public assistance to some 1.2 million Michigan residents — including some people who are lying to get it. Although the information that investigators need to help expose fraud is available, until recently they couldn't easily match up data because it existed in different agencies' information systems.

The Michigan Department of Information Technology (DIT) has been busy remedying that problem by integrating data from multiple repositories into a single data warehouse at the DHS. It has also put business intelligence query tools and reports into the hands of hundreds of investigators and staffers for the DHS Office of Inspector General (DHS-OIG), who identified $8.7 million in fraud last year. Most of that was associated with the state's DHS Child Development and Care assistance program.

"We [at the DIT] help agencies share data across the enterprise to produce these kinds of results," says Ken Theis, chief deputy director at the DIT.

The day care program, which provides assistance to working parents, had been expanding rapidly for the past five years. "We had a feeling this was a problem," says Dave Russell, department specialist at the DHS-OIG, adding that some applicants were creating fake pay stubs using home computers. "We've tossed around different ways to figure this out, but we've never had the tools to help."

"Fraud is starting to go down because the word is getting out," says the DIT's KEN THEIS.

The DHS uncovers cheating by comparing quarterly wage data from the Michigan Department of Labor & Economic Growth (DLEG) to see if recipients of day care assistance are indeed working. Before, the agency relied on calls to a hot line or worker complaints. Now, the DHS receives quarterly electronic updates from the DLEG and uploads those into its own data warehouse. Using query tools that DHS-OIG staffers built using Business Objects software, investigators drill down to identify suspicious activity, such as recipients who earned less than $500 in wages but received a high dollar amount of day care reimbursements.

"We're able to target the higher-dollar areas," Theis says, and investigators are now more efficient at finding fraud. Detection rates rose in the first two years of the initiative — identifying $3.3 million in fraud in 2004 and $9.2 million in 2005 — but the numbers dropped back a bit in 2006, to $8.7 million. Publicity about the program and subsequent prosecutions may have contributed to the drop. "Fraud is starting to go down because the word is getting out," Theis says.

While several hundred staffers and investigators can create their own queries, the DIT also puts reports into the hands of more than 3,000 DHS staffers as downloadable PDF or spreadsheet documents.

"The fact that critical data, such as wage data, is locked in complex legacy applications makes progress very difficult," says Gene Leganza, an analyst at Forrester Research Inc. "Michigan's ability to build a data warehouse across programs and departments definitely puts them in the front of the pack" compared with other states.

The DHS had a Teradata data warehouse and Business Objects business intelligence tools in place before it began the project. "It wasn't a matter of bringing in new technology but bringing the pieces together," says data warehouse contractor Jim Davis.

The DHS has used the technology in other areas as well. Theis says the DHS saved $1.6 million last year by identifying and removing from welfare rolls people who had left the state but were still receiving assistance. The DIT integrated data from an electronic benefits transfer vendor (benefits are provided on a debit card), and investigators could then create queries to discover which clients were using their benefits in out-of-state locations.

"If they're not a resident, it's a resource drain," Theis says, citing the state's role in paying out Medicaid premiums to HMOs, administering the issuance of federal food stamps and providing some direct cash assistance.

Now the DHS is working with the federal Public Assistance Reporting Information System, an information exchange established by the U.S. Department of Health and Human Services. The service matches up Michigan DHS data with that from other states, as well as with federal wage and Veterans Benefits Administration data. "We're developing our query tools and will be using the data warehouse," says Theis.

To Theis, the success of the initiative isn't so much about catching fraud as it is making sure resources get to those who need them. "It is enabling DHS to direct more and more resources toward their clients during a time when their need is the greatest and funding is stretched," he says. ▪

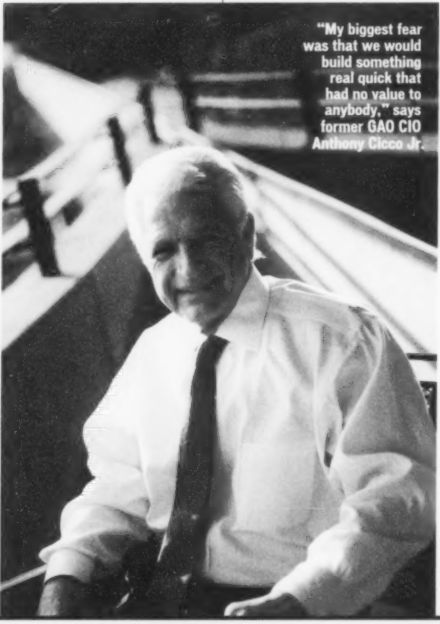
INSTANT IT

The GAO's Hurricane Central helps coordinate the efforts of 13 disaster teams.

2007 Award Winner

U.S. Government Accountability Office

By Drew Robb



"My biggest fear was that we would build something real quick that had no value to anybody," says former GAO CIO Anthony Cicco Jr.

CHRIS HARTLOVE

A lot has been written about what companies should do to keep things running when a Hurricane Katrina-size disaster strikes. But what about those who come in to clean up the mess? For Anthony Cicco Jr., then CIO for the U.S. Government Accountability Office and now a director at SRA International Inc., this meant immediately building a new portal for staffers to coordinate their actions.

"The GAO managing director overseeing the recovery asked if we could put something together that would allow the teams to coordinate their work, share documents and keep up to speed on what other people were doing," says Cicco. "The key goals were to make it easier for them to plan their work and to ensure efficiency by avoiding overlap."

Congress had assigned the GAO the task of reviewing the hurricane recovery efforts. The job entailed the coordinated efforts of 13 mission teams specializing in areas as diverse as banking, public health and flood control — as well as the participation of staff from the U.S. Department of Homeland Security, the Federal Emergency Management Agency (FEMA) and state and local agencies. Cicco presented a plan within four days, and a new portal — Hurricane Central — was online in two and a half weeks.

The companies that do best in an emergency are those that have their disaster recovery plans firmly in place. In the GAO's case, the work started well before the disaster. About a year before Katrina struck, IT staffers were volunteering their time to explore the issue in a skunk works project, says Cicco.

"We were forward-thinking enough that we were in the right place at the right time," he says. "To the extent that you have a standard infrastructure with standard Web-based tools and a staff who knows how to use them, you can turn something around like this a lot easier."

The challenge the GAO faced was that it didn't normally have multiple teams working on a large-scale project. Katrina operations, however, required a dozen separate teams working on as many as 30 simultaneous missions. Many of them needed access to similar information and documents.

"We had no way of sharing such documents and information in an easily searchable, readily accessible way," says Bill Jenkins, the GAO's director of homeland security and justice issues. "Generally, prior to Hurricane Central, staff had to search for such information across a number of engagements by job code, which assumed one knew the job code for each of the 30 engagements."

There was also the matter of making redundant information requests of FEMA and other agencies, which distracted them from their vital recovery missions.

Cicco's Hurricane Central portal proposal addressed each of those issues. It contained all the key information, such as national plans, reports and congressional testimony, as well as state and federal contacts. Users could access support services for travel and videoconferncing, a calendar listing the GAO's Katrina activities, and a discussion forum. Team members could post their current work and access the GAO's document management system.

"Four things make collaboration work: You have to know who's involved, what they are doing, how they are going to be connected and what the time constraints are," says Jessica Lipnack, co-author of *Virtual Teams* (Wiley, 2000). "It looks like they hit all four of these."

Another key factor was balancing speed and usability, since federal workers couldn't spend a year designing and testing the system. From a technology standpoint, this meant using existing resources.

"The most important lesson is that they built it in a hurry using Apache and HTML rather than formal enterprise portal software," says Tony Byrne, founder of CMS Watch in Silver Spring, Md. "When you are in a hurry, simpler is better."

The portal technology was the easy part. The harder part was making sure it met the users' needs exactly. "My biggest fear was that we would build something real quick that had no value to anybody," says Cicco.

His team worked side by side with a customer advisory group that could give quick feedback on portal iterations so the system could be continually refined.

"It was also a good model of how the IT folks and analysts could work together to create IT tools that enhanced the GAO's ability to do its work effectively and efficiently," says Jenkins. "Throughout the process, IT was constantly asking questions about how they could make the site both more user-friendly and useful."

EFFICIENCY

The site was up within three weeks, enabling faster access to information and tighter coordination between the teams.

"It would have been considerably more difficult to coordinate all of the Katrina-related engagements across the GAO and would have resulted in greater duplication of data requests from the DHS to other agencies," says Jenkins. "It would also have taken more time and effort to answer congressional inquiries about our Katrina-related work."

Hurricane Central no longer needs to support the number of Katrina projects it once did, but its underlying technologies are being put to new uses at the GAO.

"Although our Katrina-related work is winding down, the portal has proved so useful for ongoing emergency preparedness and response work that we continue to keep it updated," says Jenkins. "The portal has been the model for creating a similar portal for our work on a potential influenza pandemic, which involves a number of GAO teams."

Byrne says that keeping things simple made the site a success — and that's something other organizations can replicate.

"See what value you can bring by building a 'small p' portal with existing tools and technologies already resident in your enterprise, before investing in new tools that will — by the time you purchase, install, customize, pilot, debug and roll them out — push your project back at least a year," he says.

Lipnack agrees that it's not necessary to go overboard building a portal. "You can throw all the technology in the world at these things, but unless there are good work processes, good people processes and a lot of trust, it just isn't going to happen," she says.

Cicco did this by establishing a tight working relationship with users. He says the GAO's portal project includes a "rigorous process simplification" approach, so data is entered once and the system builds the documentation needed for an audit.

Although Hurricane Central was a success, Cicco says if he had it to do over again, he would break down the deployment of new features to make it easier for users to absorb the data. The main lesson is that organizations can get far more out of existing resources than they realize, so they don't have to look for something new.

"Organizations probably use 30% to 40% of the functions of their existing technology," Cicco says. "Just by giving people time to research and get under the hood of what you already own boosts productivity.

"Nobody could foresee the events of Katrina," he adds, "but if CIOs are constantly looking at how to make jobs easier, they will be in a better position to respond." ▸

Robb is a Computerworld *contributing writer.*

BEST IN CLASS JUDGES

SPECIAL THANKS GO TO OUR JUDGES, who helped evaluate the dozens of projects submitted by the 2007 Premier 100 IT Leader honorees. In particular, judges were asked to look for signs of measurable payback, learning experiences, strategic importance to the business, substantive customer impact, expansion or change in the role IT plays in the organization, and the creation of new revenue opportunities or cost savings. Judges, themselves Premier 100 IT Leader alumni, evaluated only those candidates outside their own industries.

ANDRES E. CARVALLO, CIO, Austin Energy, Austin

HAP M. CLUFF, IT director, city of Norfolk, Va.

PATRICK LAW, vice president of infrastructure, American Modern Insurance Group Inc., Amelia, Ohio

DENNIS P. L'HEUREUX, CIO, Rockford Health System, Rockford, Ill.

DAVID A. OLES, IT director of research and development, Rent-A-Center Inc., Plano, Texas

KAY PALMER, CIO and executive vice president of IT, J.B. Hunt Transport Services Inc., Lowell, Ark.

JOHN SCHINDLER, CIO, Kichler Lighting Co., Cleveland

TWO CIOs WENT TO IP TELEPHONY

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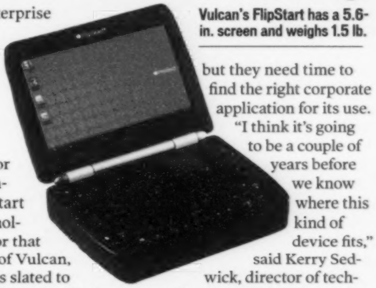
Allen Firm Unveils 1.5-lb. Ultraportable PC

Execs not yet sure of corporate uses for Vulcan device

BY MATT HAMBLEN
INDIAN WELLS, CALIF.

Vulcan Portals Inc. last week introduced a supercompact PC that weighs 1.5 lb. Known as the FlipStart, the full-function PC has a 5.6-in. screen, can run both the Microsoft XP Pro or Windows Vista Business operating systems, and has a 30GB hard drive, according to company officials.

Seattle-based Vulcan, founded by Microsoft Corp. cofounder Paul Allen, previewed the tool for about a dozen IT managers at the Mobile & Wireless Enterprise conference here last Tuesday, a day before its formal unveiling.



Vulcan's FlipStart has a 5.6-in. screen and weighs 1.5 lb.

Keith Amodt, senior product manager at FlipStart Labs, a technology incubator that is a division of Vulcan, said the PC is slated to start shipping on March 27 and will retail for $1,999.

IT managers interviewed at the conference, sponsored by Palo Alto, Calif.-based consulting firm Frost & Sullivan Ltd., said the device looks promising but they need time to find the right corporate application for its use.

"I think it's going to be a couple of years before we know where this kind of device fits," said Kerry Sedwick, director of technical architecture at American Express Technologies.

Sedwick speculated that the device could be used by American Express Co. agents during visits to the company's retail customers, when they need a fully functioning PC but "don't want to crate around a heavy thing."

"People will love the small size and weight but won't like the small keyboard and how hard on the eyes it can be," Sedwick suggested. Noting the small size of the type on the screen, Sedwick and other IT managers said the device might be best aimed at users under 40, who are less likely to need reading glasses.

George McQuillister, senior product manage for mobile services at Pacific Gas and Electric Co. in San Francisco, said he is unsure how quickly the FlipStart or similar devices, such as the Model 2 product brought out by San Francisco-based OQO Inc. in January, will catch on with corporate users.

"When one sees somebody [else] using it, others will want it," he said. "Certain individuals, like my teenage son, would love it," especially because it can run sophisticated computer games, McQuillister noted.

Similar to a small laptop, the device features a QWERTY keyboard when the clamshell is open. The keys are too small for touch-typing, but they can be pressed with one finger or "thumbed," as users do with other small devices, Amodt noted.

The exterior of the FlipStart features a so-called InfoPane that can display a calendar, Outlook e-mail and contacts when the device is closed, Amodt said.

Wireless access will be provided by a single carrier yet to be named, using the Evolution Data Optimized Rev. A network, Amodt said. Wi-Fi functionality over 802.11b/g will also be provided, he said.

Gerry Purdy, an analyst at Frost & Sullivan, said the FlipStart and similar devices represent "an interesting new category" of miniportables. Purdy said that he can see the current 30GB hard drive in the FlipStart growing to 100GB in future generations, with the standard 512MB RAM growing to 4GB. ▶

IBM Adds Google Gadgets to Portal

BY HEATHER HAVENSTEIN

IBM and Google Inc. have jointly unveiled new portlet software that will allow users of IBM's WebSphere Portal to integrate more than 4,000 Google Gadget services and utilities into the portal.

The IBM Google Gadget Portlet, which will be available in April, will allow companies to add gadgets such as maps, to-do lists, product delivery tracking tools, driving directions and language translators to WebSphere Portal 6.0 and Portal Express systems used on corporate desktops, said IBM.

'Curb Appeal'

Frank Brooks, senior manager of data resource management and chief data architect at Chattanooga-based BlueCross BlueShield of Tennessee Inc., said that the gadgets could add "curb appeal" to the insurer's WebSphere portal.

However, he added, "most of them wouldn't be meaningful to our employees" because they include nonbusiness gadgets like webcams and games.

Brooks did note that the link with Google could enable his company to pull in more substantive gadgets that Google may add in the future.

"One of my concerns is who controls the quality of the gadgets," Brooks said. "Is there quality control, or are they just gadgets you use at your own risk? How do you know if it is a meaningful gadget as opposed to a frivolous gadget?"

"We're trying to bust the barrier of things you do on the consumer side and things you do on the enterprise side," said Larry Bowden, IBM's vice president for portals and Web interaction services.

For example, a gadget that provides driving directions could be useful in the business world, he said, noting that sales personnel could use it when driving to clients' offices.

At many companies, he added, employees are demanding tools like wikis, blogs and instant messaging, which can all be added using the gadgets. Pulling the gadgets into the portal would provide such employees with access to new collaborative tools that incorporate professional features like security, Bowden said.

In related news, IBM also announced its new Search Sitemap Utility portlet, which is designed to optimize portal content for search by external search engines. ▶

Sun CSO: Endless Internet Growth Keeps Security on Back Burner

BY ROBERT McMILLAN

Whitfield Diffie *has been credited with making privacy possible in the Digital Age. As a co-inventor of public-key cryptography, he is among the most respected contributors to the field of computer security. In an interview with the IDG News Service, Diffie, chief security officer at Sun Microsystems Inc., talked about the state of computer security, Microsoft Corp.'s role in it and privacy issues.*

When the PC went on the network, there were security implications that nobody thought about. How do you think Microsoft has responded over the past five years or so? I think there are two issues. I think you'll find that lots of [potential security problems] were foreseen. I think the critical thing [is] that Microsoft showed that its judgment was correct. If it had paid less attention to security, maybe it would have had less market share. The interesting thing to me is why it's been so hard for them. I think it has to do with the problems of legacy code and the legacy interface expectations of their customers.

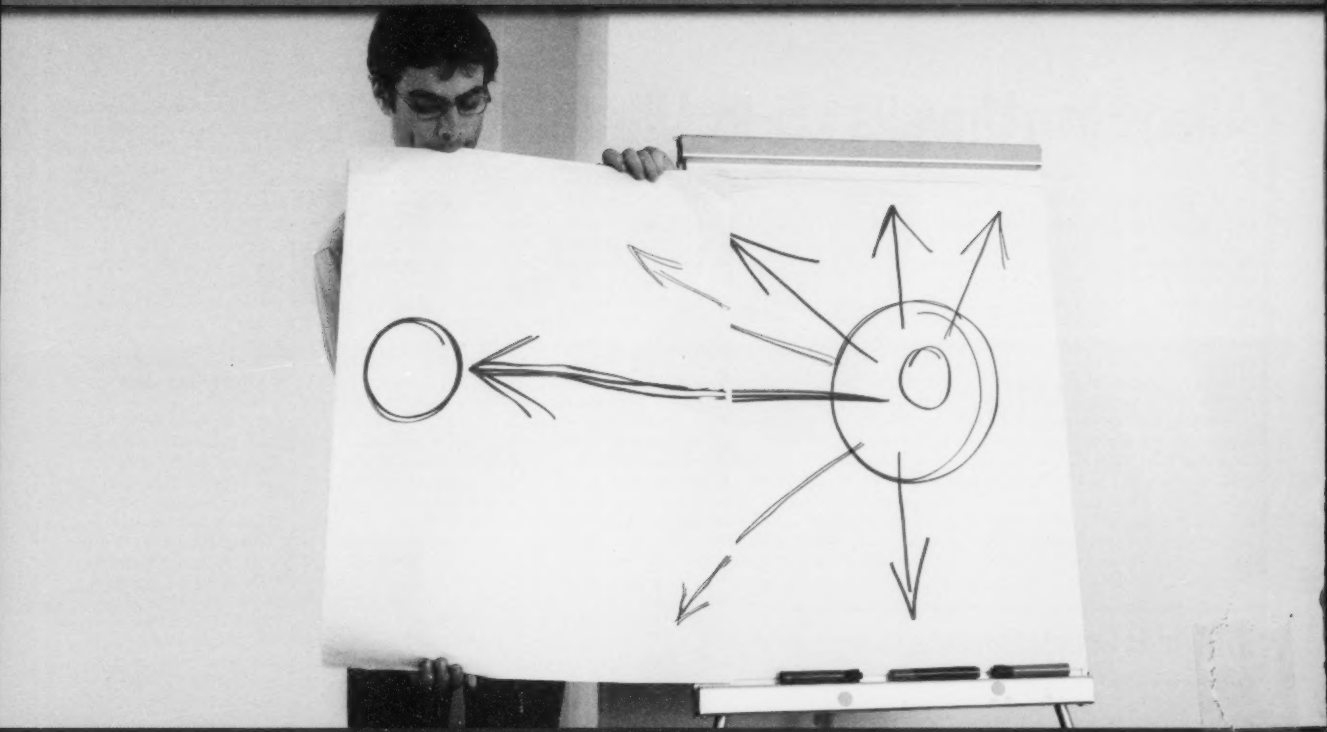
Do you believe that there's a sense among users that the Internet is not trustworthy? I think that's a well-placed misconfidence.

How do you see the state of security on the Internet today? Phishing is the security problem, at that level, that I hear the most about right now. But I certainly don't worry about the security arrangements of going to AmericanExpress.com. I'm not the least bit worried about that, partly because of the law and partly because the essential point of SSL is that the certificate costs enough money that the thieves aren't putting up a front.

I conjecture that the expansion of networked communications and society's dependence on network communications is outrunning the security of that network and will continue to do so for quite some time.

What are your thoughts on Internet privacy? I believe in privacy, but privacy is just one of a number of considerations. What bothers me is that information about people is so readily available in a way not auditable to them, to organizations like ChoicePoint, who broker it around and enable other people, who are not legally constrained in what they do with it, to make decisions based on it. ▶

McMillan is a reporter for the IDG News Service.



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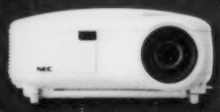

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GLOBAL DISPATCHES An International IT News Digest

EC Critical of Microsoft Antitrust Response

BRUSSELS

THE EUROPEAN COMMISSION this month repeated its criticism of Microsoft Corp.'s response to a 2004 antitrust ruling, opening up the possibility of further fines for the company.

Since the ruling, the EC has fined Microsoft €497 million ($652 million U.S.) and ordered it to disclose interoperability information "on reasonable and nondiscriminatory terms" to rival makers of server operating systems.

The commission said it doesn't believe that the information in the 1,500 pages of documents Microsoft has submitted since December 2005 is worth the price the company is proposing to charge for it.

"Microsoft has spent three years and many millions of dollars to comply with the EC's decision," said Brad Smith, Microsoft's top lawyer. "We submitted a pricing proposal to the commission last August and have been asking for feedback on it since. We're disappointed that this feedback is coming six months later, but we're committed to working hard to address the [EC issues]."

In a statement, EC Competition Commissioner Neelie Kroes said, "Microsoft has agreed that the main basis for pricing should be whether its protocols are innovative." However, she added, "there is no significant innovation in these protocols."

■ PAUL MELLER, IDG NEWS SERVICE

GLOBAL FACT

375M

Number of Internet users in Asia. That figure surpasses the number in Europe (292 million) and in North America (227 million).

SOURCE: RESEARCH AND MARKETS, DUBLIN

Stolen Laptop Held Staff's Personal Data

WORCESTER, ENGLAND

THE WORCESTERSHIRE County Council has confirmed that a laptop containing sensitive information on more than 16,000 of its employees has been stolen from IT vendor Serco Solutions.

The laptop, which contained employee names, addresses and national insurance and bank account details, was stolen in late February, according to a council spokeswoman. She said the data security breach "potentially affected a little over 16,000 staff."

The council was "not completely sure of the level of encryption" on the stolen laptop, "but our understanding is there was security on the machine," the spokeswoman said.

Hook, England-based Serco had the staff data because it is building a new payroll system for the county, the spokeswoman said. However, she added, "that doesn't explain why they were keeping it on the laptop." Serco officials were unavailable for comment.

Patrick Birch, Worcestershire council corporate services director, said the council has notified all staff members who could be affected and has set up a help line for them.

■ TASH SHIFRIN, COMPUTERWORLD U.K.

Dell Opens Call Center In the Philippines

QUEZON CITY, PHILIPPINES

DELL INC. this month opened its second call center in the Philippines and disclosed plans to increase its workforce in the country.

The company said that the new center, in Quezon City, will provide technical support and other services to Dell customers in the U.S. The facility includes training labs that simulate networked home and office environments. The call center will initially employ about 200 people, the company said.

Dell opened its first Philippine call center, in Pasay, about a year ago. About 1,400 people work there, according to the company. Dell said it plans to hire about 1,000 more people in both facilities, increasing its total employment in the country to about 2,600.

Philippine President Gloria Macapagal-Arroyo attended a ceremony marking the opening of the facility. During the event, Dell announced that it is donating a computer lab to Quezon City High School.

■ MARTYN WILLIAMS, IDG NEWS SERVICE

Budget Plan Decreases Outsourcer Tax Breaks

NEW DELHI, INDIA

INDIA'S FEDERAL GOVERNMENT has proposed a budget that would likely reduce tax benefits for the country's outsourcing industry.

In his budget speech before the Indian parliament late last month, Finance Minister P. Chidambaram proposed eliminating exemptions to the country's minimum alternate tax (MAT) that have aided the outsourcing industry in recent years.

Chidambaram also did not call for an extension of the country's Software Technology Parks of India (STPI) export-promotion scheme, which entitles outsourcing firms to tax breaks under the Indian Income Tax Act. In his speech, Chidambaram did not respond to a request by the National Association of Software and Service Companies for a 10-year extension of STPI.

Some executives in India's outsourcing business, including N.R. Narayana Murthy, chairman of Infosys Technologies Ltd., have said that the industry is large enough to pay taxes at the levels charged to other industries.

N. Ramachandran, chief financial officer of outsourcer iGATE Global Solutions Ltd., noted that the tax changes are unlikely to affect pricing by outsourcers but said they could cut profit margins.

■ JOHN RIBEIRO, IDG NEWS SERVICE

EMC to Invest $100M In Russia by 2010

ST. PETERSBURG, RUSSIA

EMC CORP. late last month announced plans to invest $100 million (U.S.) in its Russian business operations over the next four years.

The biggest investment will be made in the EMC Excellence Center, a software development center being set up in St. Petersburg, according to EMC.

Luc Brunet, general manager of EMC Russia/CIS/Baltics, said that the company's business in Russia grew by 50% during 2006.

The Russian investment represents about 10% of the $1 billion that EMC plans to spend in what it calls the BRIC countries — Brazil, Russia, India, China — by 2010, the company said.

The EMC Excellence Center is expected to open in July. The company said it expects the center to employ about 100 workers by year's end.

Employees at the center will work on developing new products and on adapting current EMC products for the Russian market, said Rona Newmark, senior vice president of EMC Excellence Center design and commissioning.

■ DMITRIY ZHELVITSKY,
COMPUTERWORLD RUSSIA

Compiled by Mike Bucken.

Briefly Noted

The British Broadcasting Corp. plans to use IBM technology to create a new video-search system. Under an agreement announced last week, the BBC will use IBM's video-search system, code-named Marvel, to first offer a search service for users of its CBeebies and CBBC children's Web sites. The technology can categorize content based on appearance as well as analyze images and video, the BBC said.

■ JOHN BLAU, IDG NEWS SERVICE

The Infocomm Development Authority of Singapore has qualified 12 bidders for the government's Next Generation National Broadband Project. To qualify, companies had to show that they have the financial resources and the skills needed to build a network that can offer speeds ranging from 100Mbit/sec. to more than 1Gbit/sec. and connect to all homes, schools and businesses in Singapore by 2012.

■ SUMNER LEMON, IDG NEWS SERVICE

Microsoft's Japanese unit has named former Hewlett-Packard Japan Ltd. President Yasuyuki Higuchi as its new chief operating officer. Higuchi was most recently president of Kobe, Japan-based retailer The Daiei Inc. Higuchi will be responsible for Microsoft's commercial and enterprise business in Japan, reporting to Darren Huston, president and CEO of Microsoft's Japanese unit.

■ MARTYN WILLIAMS,
IDG NEWS SERVICE

Intel Corp.'s investment arm plans to invest $65 million (U.S.) in PowerTech Technology Inc., a Taiwan-based chip assembler that specializes in flash memory and dynamic RAM technology. Intel Capital said the funds will support the continued growth of PowerTech's operations. Intel is a customer of PowerTech.

■ DAN NYSTEDT, IDG NEWS SERVICE

UKvisas, the joint Home Office and Foreign Office directorate that runs Britain's visa service overseas, has signed a £140 million ($271 million U.S.) business process outsourcing deal with Computer Sciences Corp. CSC will establish three regional visa application centers covering 15 countries. CSC will also be responsible for capturing biometric data on all U.K. visa applicants.

■ TASH SHIFRIN,
COMPUTERWORLD U.K.

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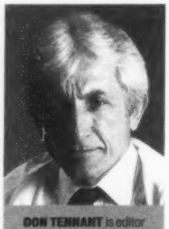
DON TENNANT

'Do the Right Thing'

OVER LUNCH with four preeminent CIOs last Tuesday, I had a preview of the coming attraction. We had gathered to go over the final logistics for a presentation at *Computerworld*'s Premier 100 IT Leaders Conference that would be conducted that afternoon in a "talk show" format, with me as the host and the four CIOs as my guests.



DON TENNANT is editor in chief of *Computerworld*. Contact him at **don_tennant@computerworld.com**

The first order of business was for me to be certain that these guys knew what they were getting themselves into.

"I don't want to spook you, because the only way we're going to make this work is for you to be as open and candid as you can possibly be," I told them. "But recognize that we'll have reporters out there, and there's no telling how many people in that audience have a blog somewhere. It's a Web 2.0 world, so don't say anything you wouldn't want to watch on YouTube tomorrow."

There wasn't much of a verbal response, but there didn't need to be. There was no antsy shifting in seats. Just nods of understanding and looks of quiet resolve that said it all.

The presentation was titled "Defining Moments in IT Leadership," and it put a glaring spotlight on these four individuals — all *Computerworld* Premier 100 IT Leaders — and how they responded when confronted with extraordinarily difficult and controversial challenges.

First up was Dale Frantz, the CIO at Auto Warehousing Co. Last year, he defied a campaign of intimidation on the part of Microsoft by going public with the strong-arm tactics the vendor was using to pressure him to cooperate with a review of his software licenses. Frantz remains steadfast in his defiance, and when he was onstage, he revealed that the experience had prompted him to actively seek alternatives to Microsoft. Frantz is researching how to move his proprietary applications off of Windows and onto Apple's Mac OS X. If he can accomplish that, he said, there's an excellent chance he'll convert to an Apple platform.

My next guest was Louis Gutierrez, who spent a turbulent nine months last year as CIO of the state of Massachusetts. True to form, Gutierrez shied away from nothing. With characteristic calm and eloquence, he discussed the state legislature's failure to give him the funding he needed to do his job, and his resultant resignation. And, like Frantz, he spoke defiantly of his relationship with a relentless Microsoft — in this case, a lobbying apparatus that was determined to bend Massachusetts to its will on office document standards.

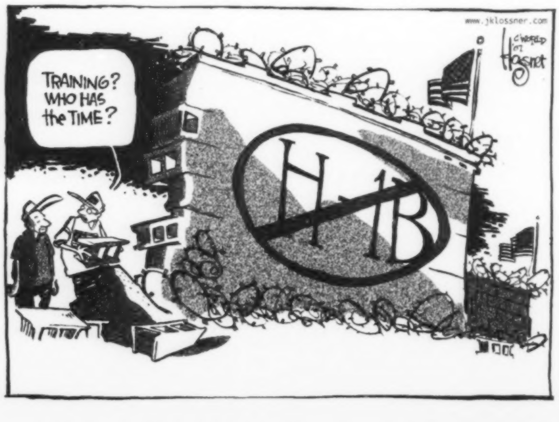
Third up was Clark Kelso, CIO of the state of California, who described a journey that began in 2002, when he was called in to clean up the mess made by an inept, scandal-plagued IT regime that had alienated that state's legislature. Like Gutierrez, he refused to allow a tempestuous political climate to cloud his vision for what he felt he needed to accomplish.

Finally, the hot seat was taken by Darryl Lemecha, CIO at ChoicePoint, the personal information brokering company that last year was fined $10 million by the Federal Trade Commission for a massive data security breach. Amazingly, that breach was the catalyst for re-engineering the company into one that's now highly regarded for its data privacy and security best practices.

When I asked Lemecha if he had any advice for TJX, the clothing retailer whose data security breach is still making headlines, his response summed up, in four words, the message that all four of my guests had conveyed: "Do the right thing."

There is no greater hallmark of an IT leader than the courage it takes to follow that advice. ▸

Don Tennant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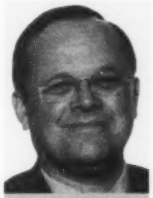
BRUCE A. STEWART

Go Beyond Normal IT

WHEN NICHOLAS CARR put forward his "IT doesn't matter" argument in the *Harvard Business Review* (and in his subsequent book and blog), he set off a firestorm of controversy in the IT community. But now, four years later, Carr's point has been made by organization after organization. Whenever a business problem is put forward, IT comes back with a package.

This response has become so dependable that those on the business side often investigate packages before bringing problems to us. Instead of rising to the challenges, we work within the limited parameters for change that we are given. The noose of being "dead-dog ordinary" tightens just a little more. There's little difference between the IT organization offering another "commodity" job and some collection of outside service providers doing it.



BRUCE A. STEWART is CEO of Vancouver, British Columbia-based Accendor Research Inc., an advisory services firm focused on management issues in the technology-enabled enterprise. He can be reached at **bruce.stewart@accendor.com**.

This isn't a screed against packages, be they software, software services or business process outsourcing. Taking anything other than the standard approach for things like accounts payable and payroll hasn't demonstrated enough value to be worthwhile. For stock business processes, packages are the natural answer, and for much of an organization's daily transactional workload, "stock standard" ought to be the norm.

But what is IT doing to help the company compete — to maintain and expand its market niche and leverage its brand identity to create new business lines? Is it moving beyond the mix of standard processes to contribute to product innovation, facilitate exemplary customer experiences and implement integration with suppliers and sourcing partners? Does it ever require that a standard process be made unique? Failing to take such steps will leave a company vulnerable to attack from competitors that go beyond the stock standard approaches. Then a core strategy of being operationally excellent at the basics degenerates as the company suffers through repeated rounds of de-optimization for short-term cash extraction. We call these "cutbacks" and "cost-constraint programs." After a while, the CEO wonders — again — why the business isn't growing.

The last pieces of the technology puzzle cannot be bought; they must be built. Package vendors can afford to develop packages only when the definition of the problem is agreed upon to the extent that there will be a market large enough to pay for the creation, support and extension of the product. Business process outsourcers depend on standardized processes so that the same team, using the same technologies, can service multiple clients. So it goes. Yes, the work of IT remains automating the processes that keep the organization running, but there's a need for real creative work — whether it's designing new business models, new products and services, or new ways of working — that can create new paths for growth. We need an IT that goes beyond the stock and the standard to true innovation, and that calls for an IT organization able to create a demand for this kind of change.

If you accept this challenge, you can expect to work in an environment that's far removed from the predictable daily workloads of package implementation, surrounded by consultants and integrators who have done it all before. The creative process is likely to be iterative and rapid, and if the early results are favorable, you can expect to go through a quick expansion. Will your IT organization lead, or will your business struggle? Whatever your role in IT, you can be a breath of fresh air and lead the way. ▸

MICHAEL H. HUGOS

Framework For Business Analysts

PROFESSIONS, by definition, rely on a body of theoretical and practical knowledge, often built up over generations. That body of shared knowledge is the foundation that allows a profession's practitioners to confront the issues they face with a common language. By applying theory and experience, they can work together to develop new best practices as challenges arise.

Are business analysts members of a profession, like architecture, engineering, medicine and law, that relies on carefully constructed frameworks that provide a basis for common understanding? Even some business analysts would hesitate to make such a claim. But the body of shared knowledge necessary for such a framework exists. In fact, I've used the concise framework in the chart below for years.

Listed in those nine boxes are all the theories and practices I have drawn upon when analyzing situations and designing effective responses, and all the time-tested metrics I have used to measure, manage and improve any situation I confront. By connecting with others who use the wealth of knowledge represented by this grid, I keep current with best practices as they emerge.

There is a lot packed into this concise framework; the categories are a way to help me absorb it in manageable chunks. But each box contains more than meets the eye. I associate particular people with the boxes that cover the areas where they have made significant contributions.

MICHAEL H. HUGOS is a principal at the Center for Systems Innovation and a speaker. He is a member of the 2006 *Computerworld* Premier 100 IT Leaders class. His books include *CIO Best Practices: Enabling Strategic Value with Information Technology* (John Wiley & Sons, 2007). He can be reached at **www.MichaelHugos.com**.

That first box, information theory, makes me think of Claude Shannon. While working at Bell Labs in the 1930s, he defined what data actually is and developed the math that describes how to manipulate data and transport it.

Cybernetics is the realm of Norbert Wiener. He coined the term and in 1948 wrote a book by that name in which he defined *cybernetics* as the theory of control and communication in mechanical, electrical and living systems.

Total Quality Management brings to mind Kaoru Ishikawa. He was a university professor instrumental in the formulation of TQM techniques and played a central role in introducing these methods to Japanese companies. Companies like Toyota used these techniques to create the operating practices now known as lean manufacturing (which gets its own box in my framework).

THEORY	METRICS	PRACTICES
Information theory	**Operation research**	**Lean manufacturing**
Cybernetics	**Total Quality Management**	**Business process re-engineering**
General systems theory	**Six Sigma**	**Business process management**

There are a lot more people that this framework makes me think of and whom you might find interesting. You might want to take a little time and find out where in the framework Stafford Beer, Ludwig von Bertalanffy, W. Edwards Deming, Jay Forrester and Peter Senge fit in. Your research and what you know about other people involved in these theories should lead you to some useful insights the next time you're confronted with a complex project.

Certainly, by grounding myself in these theories and practices, I have been able to use this framework to analyze and make sense of complex situations and then design effective solutions without having to delve into every detail of the situation before me. It's just the sort of thing that architects, engineers, doctors and lawyers do so they can operate effectively in the face of what is otherwise an incomprehensible flood of ever-changing details. ▸

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READERS' LETTERS

Memory Hog

USERS WHO prefer Safari as a browser should keep an eye on its memory usage; after a day or two, it will grow to 100MB ["Firefox Loses Browser Share, Safari Gains," *Computerworld.com*, Feb. 21]. Firefox's memory usage is well controlled.

Bob Dobkin
Milpitas, Calif.

When Things Got Bad in the IT World

THINGS GOT bad for IT when companies started outsourcing and, especially, offshoring corporate IT work after the Y2k nonevent ["IT, We Have a Problem! Part II," Management, Jan. 29]. Programmers were being compared to factory laborers and seen as the bottom of the software chain, producing low-level work. This misconception has taken root, and IT as a whole now has a very bad reputation.

But the truth is that most IT professionals work at least 50 hours per week while getting paid for 40. They are expected to do whatever it takes to get the work done – working late and over the weekend – to meet unrealistic deadlines.

Meanwhile, constant cost-cutting means less training and smaller staffs because of downsizing. And besides being experts on the technical field, IT pros are expected to be proficient in the business. Business people don't have to be proficient in IT, though, so IT pros have double the work and expectations.

It seems that the denigration of IT is happening only in the developed world, though. IT is very well respected in India, China, Russia and other less developed countries. Eventually, these countries will take over IT worldwide.

Guillaume Rheault
Senior technical consultant, Atlanta

Consensus vs. the Scientific Method

MARK HALL'S Feb. 19 editorial, "E-waste Not," about global warming and IT makes a fatal logical flaw. He wrote, "The scientific consensus is that the release of greenhouse gases through the consumption of fossil fuels causes global warming."

However, a consensus does not equate to fact. When scientists can use the scientific method to prove that global warming is caused by humans, then I will accept it as fact.

A consensus of scientists is no more fact than a consensus of politicians. I agree that IT should consider environmental impact, but we must remain rooted in fact and not consensus.

Ken Blair
IT support manager, Cardtronics Inc., Houston

COMPUTERWORLD welcomes comments from its readers. Letters will be edited for brevity and clarity. They should be addressed to Jamie Eckle, letters editor, Computerworld, PO Box 9171, 1 Speen Street, Framingham, Mass. 01701. Fax: (508) 879-4843. E-mail: letters@computerworld.com. Include an address and phone number for immediate verification.

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STRATEGIES & TACTICS

Inside 03.12.07

World-class Service Is Within Your Reach. Rohm and Haas Co. used an IT service catalog and five guiding principles to achieve a breakthrough in IT customer service. IT Mentor Bob Hilsdon explains how the ITIL catalog tool can work for you. **PAGE 28**

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Offshoring Grows Up

No longer just a tactical search for cheap commodity work, it's increasingly about strategic sourcing.

BY MARY BRANDEL

THE WORD *offshoring* still causes some IT professionals to break out in a cold sweat and others to reach a low boil. Debates continue to rage on the merits and morality of getting technology work done by non-Americans for wages lower than those of their U.S. counterparts. But meanwhile, the practice of offshoring has not only become more prevalent, it has also begun to mature.

Call it Offshoring 2.0. The corporate view of this practice is evolving from the relatively simple idea of moving commodity work from the U.S. to (usually) India with the hope of reaping cost savings, to much more complex, multishore arrangements with more nuanced and strategic goals. These include achieving variable staffing capacity, freeing internal resources, finding the best talent, increasing speed to market and enabling follow-the-sun support.

In effect, offshoring has grown up. In its infancy, just a handful of adventurous companies sent highly codified work overseas. During its rebellious adolescence, it stirred a furious national debate, and the practice's previously unrecognized management challenges and hidden costs came to light. Now it's poised to enter a less tumultuous young-adulthood. At this stage, there is less mystery, and the benefits and pain points are better known. This enables companies with some experience to approach offshoring as part

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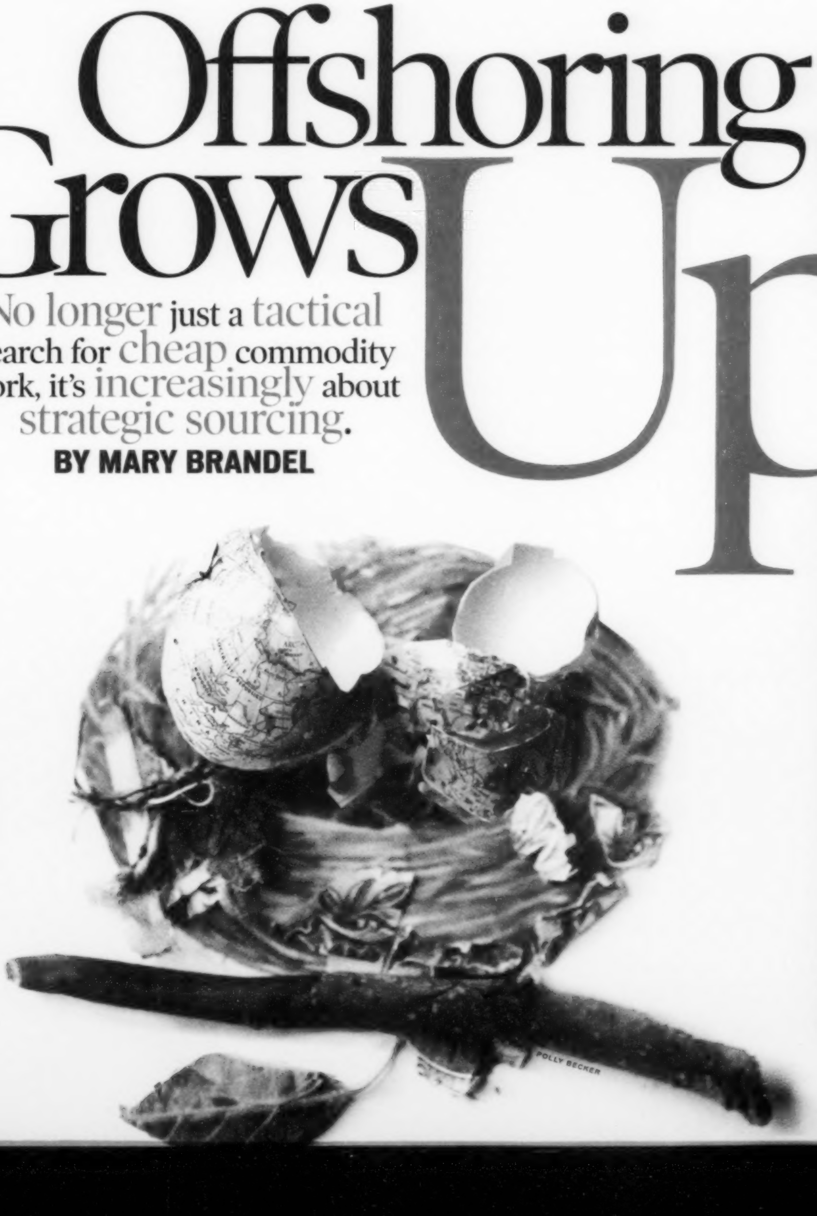

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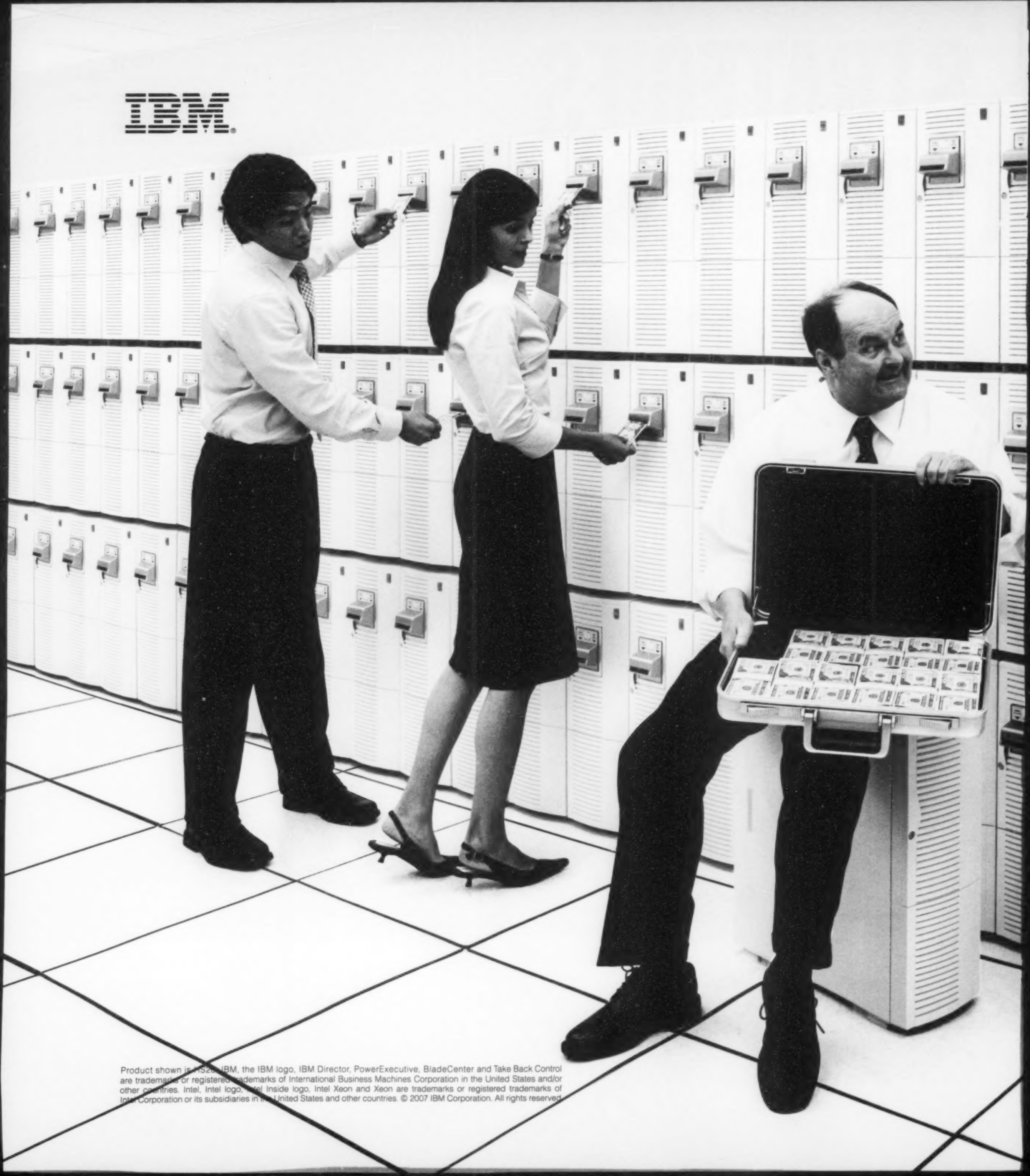

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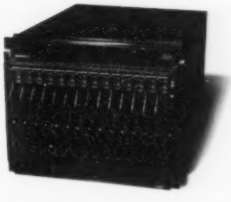
_I am Ned. I am so money.



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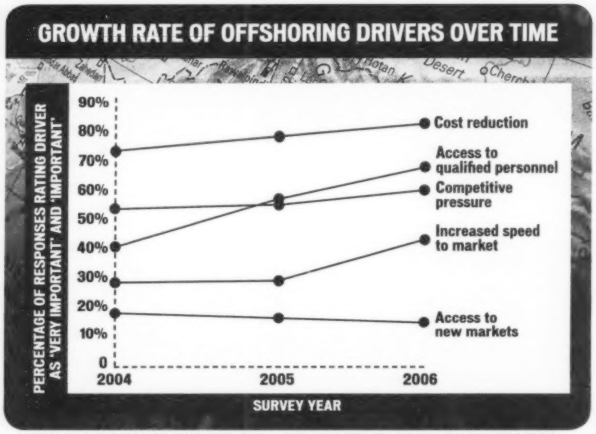
of a broader strategic sourcing strategy rather than in a tactical, one-off way.

"The 'not built here' mentality has really dissipated," says Danny Siegel, director of data warehousing and business intelligence technologies at New York-based Pfizer Inc., which uses several outsourcing providers. "With budgets shrinking and requirements growing to improve quality and timeliness, there's a lot of pressure on IT management to really rethink how they source for technology projects."

It's reached the point, Siegel says, "that I couldn't care less if the people come from Chennai, Shanghai, Poland or the Ukraine — that's irrelevant. As long as it's a high-performance work team that gets the job done at a competitive price, great."

Siegel considers it the job of the service provider — whether based in the U.S. or India — to provide him with the best and the brightest, whether onshore or offshore, "and that means global sourcing," he says.



GROWTH RATE OF OFFSHORING DRIVERS OVER TIME

SOURCES: DUKE UNIVERSITY/ARCHSTONE CONSULTING LLC OFFSHORING RESEARCH NETWORK 2004 AND 2005 SURVEYS; DUKE UNIVERSITY/BOOZ ALLEN HAMILTON OFFSHORING RESEARCH NETWORK 2006 SURVEY

Changing the Name

Indeed, terms like *global sourcing* and *strategic sourcing* are starting to replace *offshoring* for companies striving to fit their use of overseas talent into their overall business strategies. And offshoring is no longer solely about cost. For instance, Siegel has occasionally requested that his outsourcer assign specific developers from other countries to a given project because he's gotten to know and respect their work on other projects. "These are people who came up through the ranks and ended up being real stars with functional experience," he says. "Seven years ago, that never would have happened. It took time for them to obtain the institutional knowledge and, based on that, move upstream."

Tim McCabe, director of IT strategic sourcing at Delphi Corp., has also moved beyond cost-only goals when selecting a services provider. In fact, his title is a new one for Troy, Mich.-based Delphi. "It reflects a change of approach from sourcing as a tactical commodity to a much more leveraged global perspective," he says. "It's about the best way to get business done, whether it's offshoring, outsourcing, resourcing or insourcing, as well as a broader view than just, 'What's the lowest price that I can pay for a service or commodity?' "

Delphi's strategic sourcing approach does not explicitly require an offshore footprint, McCabe says. At times, he might contract with a domestic outsourcer that chooses to use offshore workers as part of its service. Other times, he explicitly chooses an offshore provider, but for reasons beyond cost.

For instance, Delphi has contracted with Tata Consultancy Services Ltd. (TCS) in Mumbai, India, to handle its global SAP development, deployment and support, but the goal wasn't merely to tap into the SAP talent available there for a competitive price. It was also to optimize time-zone advantages, particularly when it came to supporting clients in the Asia-Pacific region.

But the TCS contract does not cover global application development and maintenance. In another strategic move, Delphi has moved away from multiyear agreements with single providers. Instead, like other large companies, it's adopting a more technology-driven sourcing strategy that takes advantage of the core competencies of several providers.

"We can do that more readily than five or six years ago because suppliers are getting the message that we want three or four and we want them to collaborate," McCabe says.

Moreover, there are times when he wouldn't want the outsourcing staff to be physically removed from his onshore client base. "When you have an application with high-touch requirements, physical presence becomes

Skills Play Catch-up

IN HIS THREE YEARS of experience with offshoring, David Baruch has contracted with two different service providers, and he's in the process of gearing up to switch to a third. As CIO at Equity Office, he has found that these frequent changes have helped him develop what is increasingly considered an important competency: the ability to successfully find, engage and manage global sourcing providers.

"Clients are becoming more sophisticated and thinking about [outsourcing] more proactively," says Greg Kirchhoefer, a partner at Kirkland & Ellis LP in Chicago. For instance, he says, they're creating offices of strategic sourcing and appointing chief sourcing officers, sometimes as an outgrowth of the procurement function. "They're seeking opportunities for improving processes, effecting change and getting a better overall return," Kirchhoefer says.

As part of this evolution, organizations such as the International Association of Outsourcing Professionals now award certification to outsourcing professionals who can demonstrate skills in aligning outsourcing with corporate strategy, identifying the right opportunities for outsourcing, and structuring outsourcing arrangements.

Other relevant skills include the ability to implement processes for offshoring, sustain desired service levels, create and collect metrics, and ensure that everyone sticks to contract terms, says Danny Siegel, director of data warehousing and business intelligence technologies at Pfizer.

"I'm starting to see a desire for effective vendor management – the ability to broker these deals and make them fly," he says. "If you can find vendors with the right resources – and that don't bother you with geographic concerns like immigration issues – that's a personal competence."

According to Gartner, there are six requirements for successfully managing an outsourcing relationship:

- **Setting** overall objectives, priorities, policies and procedures that make the agreement work.
- **Identifying** capabilities needed for the business, and selecting appropriate service providers.
- **Building and maintaining** disciplined cooperation among all the service providers and the company.
- **Controlling** commercial arrangements like funding, pricing and billing, as well as the ownership of assets and intellectual property.
- **Monitoring** the performance of all the stakeholders (not just service providers) against agreed-upon targets.
- **Ensuring** regular reporting, capturing lessons learned and providing the information needed for short-term corrections and long-term enhancements.

Right now, such competencies are hard to find. According to a recent survey of 530 U.S. and European companies by Duke University and consultancy Booz Allen Hamilton, one of the most significant challenges of offshoring for CIOs is the lack of people with the skills to manage an offshore workforce.

"Often, IT managers are too technical or do not have appropriate multicultural and multinational experience to successfully manage offshore employees," says Vinay Couto, a principal at Booz Allen.

That's why IT professionals with these skills will find themselves in increasing demand. As Siegel says, "The technology management folks are becoming the real secret sauce in this equation."

– MARY BRANDEL

critical, and in that case we understand the price difference and are willing to pay for that," he says.

If the old offshoring model could be represented as a one-way arrow pointing from the U.S. to a lower-cost overseas location, the new global sourcing model has arrows that form a complex web. In the new model, work can flow from a client in the U.S. to an Indian company that passes along a coding piece of the project to a Chinese subcontractor and the consultative piece to its employees in the U.S. Or a U.S. provider might divide the work among a team of U.S.-born workers, offshore coders and foreign employees with deep functional experience.

All this goes to show that the wrong way to start any project is by focusing on where the work will be done, says Lorrie Scardino, an analyst at Gartner Inc. "If you're trying to figure out where to do things, that's backwards," she says. "Too many executives come at this by saying, 'Let's offshore.' "

A more strategic approach, Scardino says, is to move through a series of questions that begins not with "where" but with "why." Why are you outsourcing in the first place? What results are you expecting to gain from it? Then it makes sense to define the scope of what you intend to outsource, Scardino suggests. For instance, are you going to outsource your entire ERP platform, or just upgrades and patches?

Next comes "who," Scardino says. That requires looking at various delivery models, such as utility computing and on-site arrangements. Only when you know which providers are best at what you want done should you start exploring where the work should be done, she says. "Imagine if you decided, 'We're going to do all our application development in India,' " she says. "What are you going to do in three years, when India is just as expensive as San Antonio, Texas, which is cropping up as low-cost location in the U.S.? If your whole strategy is just offshoring to India, that's a very weak strategy."

Another sign of offshoring's growing maturity is the number of companies that claim they're engaging in it not for savings but to find qualified personnel.

TRENDS

The worldwide market for offshore IT services will grow from nearly $7 billion in 2003 to $17 billion by 2008, according to IDC. Most offshore spending by U.S. companies will be on applications, particularly custom application development, application management and systems integration.

In fact, in a recent survey of 530 U.S. and European companies by Duke University and management consultancy Booz Allen Hamilton Inc., nearly three quarters of the companies that seek offshore talent for high-end functions such as product development or research and development reported that access to qualified personnel is the most important reason they do so.

"There simply aren't enough high-skilled engineering and science graduates available in the U.S. to meet the demand for these resources," says Vinay Couto, an analyst at Booz Allen. "Employers complain that the quality and skills of the available graduate pool within the U.S. is not sufficient to meet the high standards required for functions such as product development, engineering, design and other innovation-centered functions."

Finding domestic talent isn't so difficult on a "onesies-twosies" basis, according to McCabe, but "if you're looking for a large concentration of skills to handle a lot of work, it's not always here onshore." Or at least you won't find it without putting in some effort.

"If I need a lot of .Net programmers, it's easier to call an offshore provider," agrees David Baruch, CIO at Equity Office Properties Trust, one of the largest owners and managers of office buildings in the U.S.

Baruch also agrees with another of the study's findings: Companies are moving past external factors such as political backlash to confront internal ones, such as the managerial and organizational changes they have to make to take advantage of offshoring.

Chicago-based Equity Office started outsourcing three years ago when Baruch needed to supplement his relatively small staff of 100 people to complete a big project. He signed on with a U.S.-based provider that used offshore staff for the project. Baruch has continued to expand his use of overseas resources, albeit with a different provider. Today, offshore personnel account for about 20% of his staff's peak work output, including maintenance and higher-level project work.

The first challenge of the transition was getting his own staffers to accept the offshore model. "While it was painful in the short term, they realized there were benefits in the long term because it was work they didn't necessarily want to do," Baruch says. The second part was getting IT staffers to pass along required knowledge to the offshore provider and "having them understand what we're trying to do from thousands of miles away," he says.

Today, Baruch sees the relationship more as co-sourcing than offshoring. "They have a certain set of responsibilities in the development process, we have a certain set, and we measure each other to be sure we're each holding up our end of the bargain," he explains.

Baruch says that low cost is just one benefit he gets from tapping overseas talent. It also gives him variable staffing capacity, which allows him to maintain a stable workforce with deep business skills. Outsourcing gives him scheduling flexibility, so he can ramp a project up or down as needed. In addition, it enables marginal projects to achieve returns on investment that they otherwise never would. "For projects that people would have historically passed on, there's now value in doing them because it takes a third of the cost to do it," he says.

Over time, Baruch can see other business processes that Equity Office currently outsources eventually moving to an offshore provider. "It's all a question of what you want to outsource, how you want it to be done and the value derived from doing it," he says. "Then you can talk about where the work lends itself to being performed — onshore or offshore, with high-priced or low-priced talent."

As others with offshoring experience gain this type of understanding, Scardino predicts, "offshoring will be recognized pretty universally as a destination, not a strategy." ▪

Brandel is a Computerworld *contributing writer in Newton, Mass. Contact her at marybrandel@verizon.net.*

A Rising Tide of Expertise

A MAJOR REASON why companies are able to approach offshoring more strategically is that offshorers are establishing themselves as full-fledged multinational operations with ever-growing areas of expertise that may soon rival those of their U.S. competitors, says Paul Roehrig, an analyst at Forrester Research Inc.

He cites a recent $140 million, five-year comprehensive outsourcing agreement between Tata Consultancy Services and Ecuador's largest private bank, Banco Del Pichincha CA, in which TCS will retain 500 of the bank's current employees. They will be augmented by TCS's own business process outsourcing center in Chile, which was established through an acquisition.

"That's exactly the sweet spot of the IBMs, EDSs and HPs of the world," Roehrig says. "Five years ago, it never would have happened." While U.S.-based providers still have the edge in areas such as onshore delivery, alignment with vertical markets and consultative selling, Indian providers are working hard to overcome their weaknesses in those areas, he points out.

And as that happens, it's important for companies to rethink what offshoring means, Roehrig says. "It's starting to mean having the work done where it can be done best, balancing price and service components," he says. "There are still customers who just want to cut costs and who think that by booting work to India they'll do that – and they will. But they're not leveraging the complete value of that relationship."

Gartner analyst Lorrie Scardino agrees that India-based providers have much to offer in terms of process standardization, portfolio rationalization, automation and process maturity. These capabilities will play an increasingly important role as Indian labor costs rise.

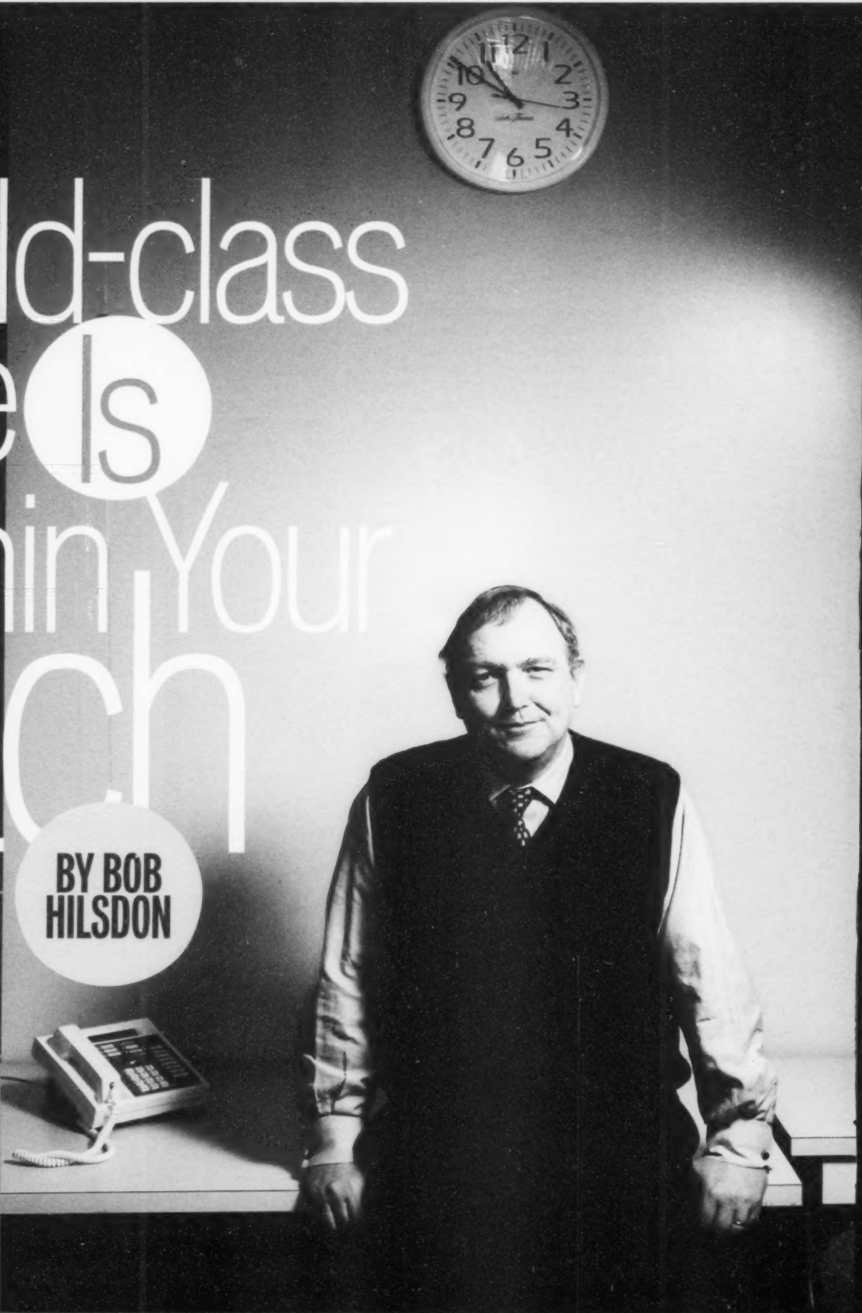
"When it was just a low-cost labor source, that's all companies were interested in – replicating what they had with people who cost less," she says. "But if they leverage this other potential, they'll see the results and sustained advantage, especially as labor costs go up."

– MARY BRANDEL

World-class Service Is Within Your Reach

BY BOB HILSDON

The IT service catalog can get you there.



Bob Hilsdon, IT customer service director at Rohm and Haas Co., has taught his group what it means to be customer-centric.

BILL CRAMER

IT MENTOR

ACHIEVING world-class IT service delivery is not just about operational efficiency.

In the midst of increasing technology commoditization, internal IT departments must provide service that's better than what customers expect. At Rohm and Haas Co., we recognized this challenge a few years ago and set out to differentiate our IT department as a world-class service organization. Our goal was to partner with the business, moving from a respond-as-needed approach to a more proactive service-centric model.

As a benchmark for world-class service, we set a target goal of a 3.8 customer satisfaction rating out of a possible 4. We conducted employee surveys to track our progress, and our service ratings steadily climbed from a score of 2.7 to 3.5 by late 2004. But after that, we were stuck at 3.5 for nearly two years. Our best efforts didn't boost the satisfaction rating. To learn what was holding us back, we conducted sessions with employees and business executives throughout the corporation and around the world.

Two key issues came to the forefront:

- **There were too many channels for communicating with IT.** Whether a new employee wanted wireless access for a computer or the business required the IT infrastructure for a new manufacturing plant, customers were often passed around from group to group when they requested IT services, and they were tired of it. They wanted a "one-stop shop."
- **There was a lack of transparency into IT service delivery.** Our corporation has more than 15,000 employees at more than 150 locations around the world, with about 250,000 IT-related requests annually. With this volume, it was easy to lose track of what we were doing and whether we were spending our time on the right things. Our customers were frustrated that it took so long for us to meet their needs, and they wanted to be able to check the status of their requests.

We had to fix these two basic problems to become a world-class service organization. We needed a clearly articulated catalog of what IT was able to do for the business, a single place for customers to make IT requests and a mechanism for tracking the timely fulfillment of those requests.

Watch Out for These Missteps

1 **ENDLESS DOCUMENTATION.** Don't fall into the trap of creating spreadsheets and documents that list every service and all the technical details. This approach leads to a static service catalog that no one will ever read or use. From the outset, approach this like Amazon.com, not the old paper Sears catalog.

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> **CUSTOMERS WERE OFTEN PASSED AROUND FROM GROUP TO GROUP WHEN THEY REQUESTED IT SERVICES, AND THEY WERE TIRED OF IT.**

We found that central intake mechanism in the IT service catalog, a concept that has been advanced by the IT Infrastructure Library (ITIL) and other IT process frameworks. The service catalog is a relationship management and communications vehicle that enables IT to categorize and publish what it does. The catalog also offers customers a one-stop shop for requesting and tracking IT services. For us, it's the foundation for moving to a more service-centric IT model and delivering world-class service.

By adopting and implementing an IT service catalog, we've been able to better align IT services with business needs. With a clearly defined set of standardized services, we can improve the repeatability and transparency of IT service delivery. And with more visibility into the demand for IT services, we can better manage the growing demand for IT services from the business.

So, how did we do it? By following these five principles, we were able to quickly deploy a service catalog and improve the relationship between IT and the business across our global organization:

1. Define standardized services from the business perspective. The business doesn't know what IT does. By defining and publishing our services — using business terminology like "order to cash" and "new employee services," not technical language like "DASD storage" — we've been able to clearly articulate what IT does for the business. Using this language has also helped our entire team understand what it means to be a service-centric organization.

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In our service catalog, we've defined a broad range of operational services, such as help desk services for our workforce; infrastructure services, including the provisioning of new servers for application hosting; and transformational services to develop new projects that drive the business forward. By managing all IT requests through this one point of interaction, we can improve end-to-end visibility, for everything from large development projects to day-to-day services.

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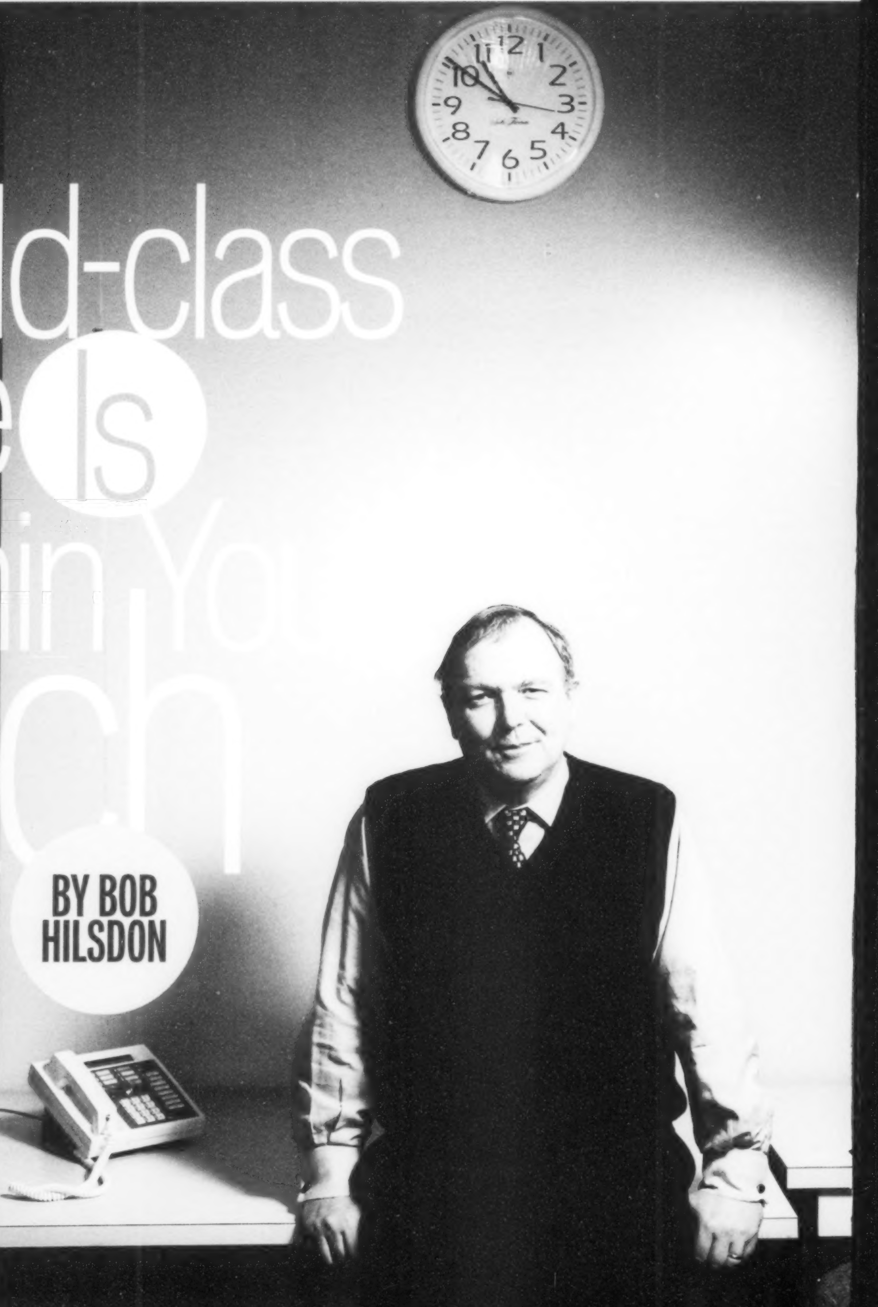

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Three new programming languages seek to speed up the development of supercomputer applications.

FOR YEARS, the name of the game in supercomputing has been raw speed, with hardware and software designers striving to boost the number of instructions per second — FLOPS — that could be crunched. Gigaflops computers gave way to teraflops machines, which are now yielding to petaflops models — those able to execute 1 quadrillion computations per second.

But those performance ratings are misleading, because they ignore a huge portion of the time required to solve a problem with these multiprocessor computers — the hours, weeks or even years it can take for software designers to formulate a solution and for programmers to code and test it.

That's why the Defense Advanced Research Projects Agency in 2002 changed the name of its High *Performance* Computing Systems program to High *Productivity* Computing Systems (HPCS). DARPA hoped that its contractors — Cray Inc., IBM and Sun Microsystems Inc. — could come up with programming languages and tools to improve software development productivity tenfold.

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The three languages, all available as open-source software, differ substantially when it comes to details, but they have this much in common:

- They are intended to boost programmer productivity by a factor of 10 or more while running at least as efficiently as existing languages such as Fortran and C.
- They are aimed at a wide range of multiprocessor computers and clusters, from the "petascale" behemoths at national laboratories to the multicore processors now appearing on desktops. Similarly, they are intended for use in at least some mainstream, business-oriented applications, not just in science and engineering.
- They try to make it easier for programmers to exploit the various levels of parallelism in application software threads, multicores, multiprocessors and distributed clusters.
- They employ techniques to relieve programmers of work and help them avoid opportunities for coding errors. For example, all use a technique called "type-inference," so programmers don't have to specify the type of every variable, which is tedious and error-prone. And they use techniques for synchronizing operations without locking, so that common problems such as deadlocking are avoided.

John Mellor-Crummey, a computer science professor at Rice University, salutes the productivity goal of the three languages, noting, "Programming of parallel systems is much too hard today."

But he says it won't be easy to evolve the nascent languages — which now run on single, shared-memory systems — to run efficiently on big, distributed-memory parallel systems. "Until then, these languages won't see much attention," Mellor-Crummey says.

Eric Allen, a co-leader of the Fortress project at Sun Labs, says the language is ideally suited for relatively static environments. But applications that do a lot of dynamic code-loading or Web accessing would probably still be coded in Java, he adds. He says a full-function Fortress compiler will be developed and will include optimization features that have never existed in a language before (see diagram).

Like Fortress, Cray's Chapel is a brand-new language. A few alpha users are working with an early Chapel compiler for serial code, but a production-grade compiler for parallel codes is several years away, according to Chief Technology Officer Steve Scott. He says Cray is also developing debugging and performance-analysis tools that, unlike existing tools, will be able to scale up to systems with 1 million processors.

Scott says Chapel will be well suited for machines with low communications overhead, globally addressable memory and many possible parallel threads of execution. He says the most important advance in Chapel is its separation of algorithm specification from machine-dependent structural considerations. That makes it possible for programmers first to code and debug algorithms in relatively simple programs, then later specify how the data is to be laid out in the machine for the most efficient access.

IBM's entry, code-named X10, is a parallel, distributed, object-oriented language developed as an extension of Java. It is designed for systems built out of multicore symmetric multiprocessing chips — such as IBM's Power processors — interconnected in scalable cluster configurations.

X10 takes the advantages of object orientation in Java for serial code and adds language constructs for parallel and distributed processing, says Vijay Saraswat, a researcher at IBM. The early version of X10 simply translates X10 code into Java, but a full-function optimizing compiler will be available to meet DARPA's 2010 deadline, he says.

DARPA says it has "no plan" to pick a winner among the new languages, but it clearly hopes that at least one of them will be a commercial success. And, as multicore processor chips become ubiquitous, that would be a welcome outcome, says Mellor-Crummey.

"What we are seeing," he says, "is not a gradual shift but a cataclysmic shift from the sequential world to one in which every processor is parallel. In a small number of years, if your language does not support parallelism, that language will just whither and die." ▸

A MIGHTY FORTRESS

Sun is betting that its new language for high-performance computing will appeal to scientists and engineers because it uses mathematical notation directly in the code. Here are some other notable features of Fortress:

- Unlike other languages, many features, such as loops, are set up for **parallel execution by default**. "It's difficult to write a program in Fortress that isn't parallel," a Sun researcher says.
- It employs "**work stealing**." If an execution thread becomes idle, it can steal work from another thread in order to balance work across the machine.
- It allows programmers to specify units – such as **velocity, time and length** – for variables, and it won't allow erroneous operations such as subtracting 6 meters from 10 kilograms.
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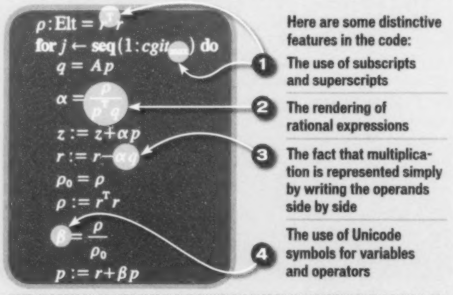

```
ρ:Elt = r^T r
for j ← seq(1:cgit_max) do
  q = Ap
  α = ρ / (p^T q)
  z := z+αp
  r := r−αq
  ρ_0 = ρ
  ρ := r^T r
  β = ρ / ρ_0
  p := r+βp
```

Here are some distinctive features in the code:
1 The use of subscripts and superscripts
2 The rendering of rational expressions
3 The fact that multiplication is represented simply by writing the operands side by side
4 The use of Unicode symbols for variables and operators

NOTE: THE SECTION OF CODE USED IN THIS EXAMPLE IS PART OF AN ALGORITHM THAT IS TYPICAL OF UNSTRUCTURED GRID COMPUTATIONS, EMPLOYING UNSTRUCTURED MATRIX VECTOR MULTIPLICATION

NEVER ENOUGH

Richard Barrett, a computer scientist at Oak Ridge National Laboratory in Tennessee, is trying out Chapel, Fortress and X10. He says the promised development productivity will be welcome, but "runtime performance is a concern." He notes that execution efficiency is the ultimate goal in his lab, where the motto is, "Bigger, better, faster, more – and even that is not enough."

"The applications I'm familiar with will be used for several years, or even decades," Barrett explains. "A scientist who has an idea will . . . run a set of experiments, each of which may consume days, weeks or months of computer time when using the most powerful machines in the world. The few machines with these capabilities are quite popular, so an experiment may sit in the queue for hours, days or even weeks. So, easy-to-write code that runs significantly slower than harder-to-write code is not acceptable."

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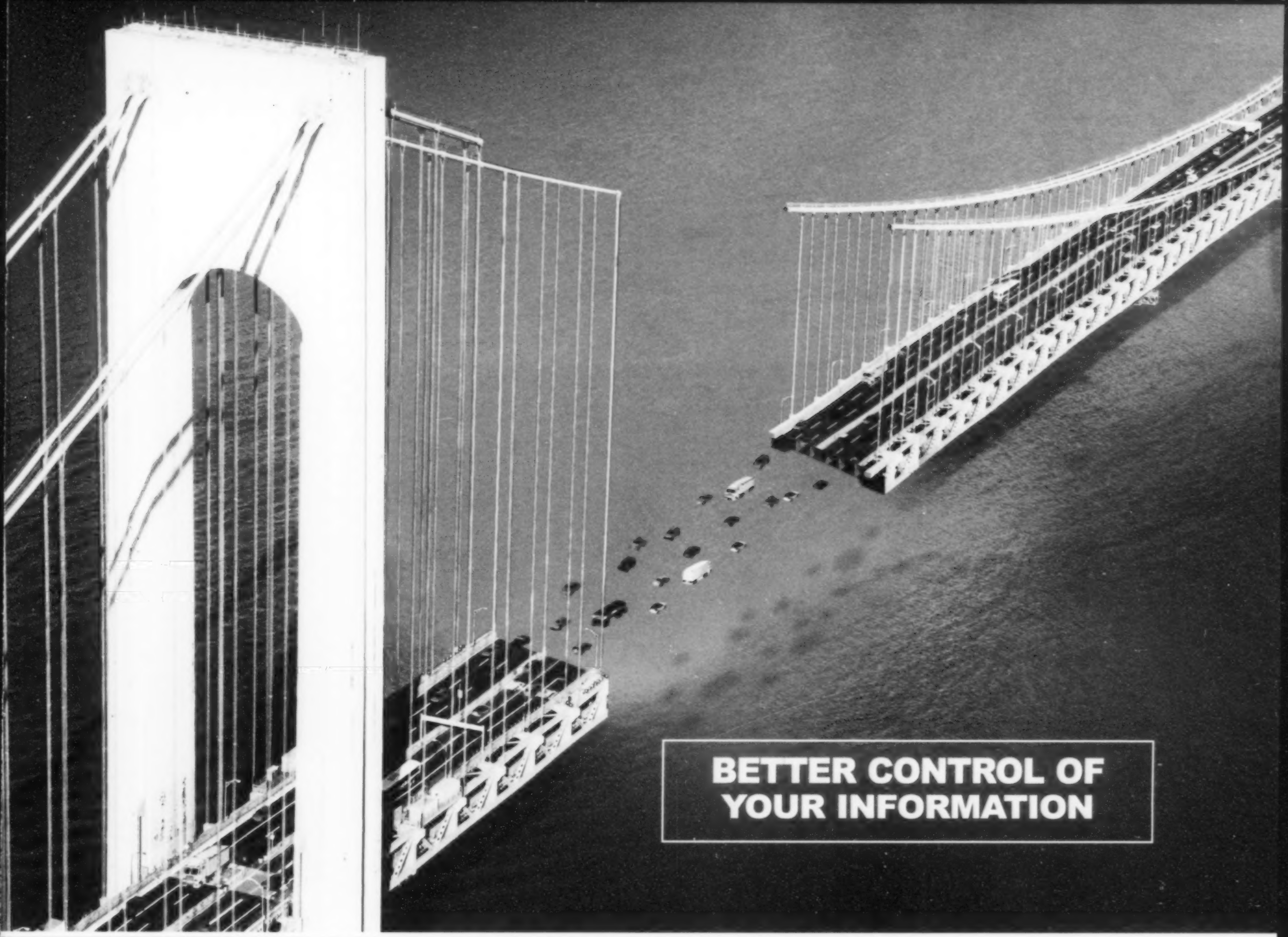

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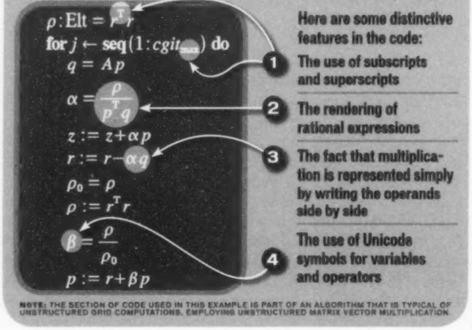

$$
\begin{aligned}
&\rho : \mathrm{Elt} = r^{\mathrm{T}} r\\
&\mathbf{for}\ j \leftarrow \mathbf{seq}(1 : cgit_{max})\ \mathrm{do}\\
&\quad q = Ap\\
&\quad \alpha = \frac{\rho}{p^{\mathrm{T}} q}\\
&\quad z := z + \alpha p\\
&\quad r := r - \alpha q\\
&\quad \rho_0 = \rho\\
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- They employ techniques to relieve programmers of work and help them avoid opportunities for coding errors. For example, all use a technique called "type-inference," so programmers don't have to specify the type of every variable, which is tedious and error-prone. And they use techniques for synchronizing operations without locking, so that common problems such as deadlocking are avoided.

John Mellor-Crummey, a computer science professor at Rice University, salutes the productivity goal of the three languages, noting, "Programming of parallel systems is much too hard today."

But he says it won't be easy to evolve the nascent languages — which now run on single, shared-memory systems — to run efficiently on big, distributed-memory parallel systems. "Until then, these languages won't see much attention," Mellor-Crummey says.

Eric Allen, a co-leader of the Fortress project at Sun Labs, says the language is ideally suited for relatively static environments. But applications that do a lot of dynamic code-loading or Web accessing would probably still be coded in Java, he adds. He says a full-function Fortress compiler will be developed and will include optimization features that have never existed in a language before (see diagram).

Like Fortress, Cray's Chapel is a brand-new language. A few alpha users are working with an early Chapel compiler for serial code, but a production-grade compiler for parallel codes is several years away, according to Chief Technology Officer Steve Scott. He says Cray is also developing debugging and performance-analysis tools that, unlike existing tools, will be able to scale up to systems with 1 million processors.

Scott says Chapel will be well suited for machines with low communications overhead, globally addressable memory and many possible parallel threads of execution. He says the most important advance in Chapel is its separation of algorithm specification from machine-dependent structural considerations. That makes it possible for programmers first to code and debug algorithms in relatively simple programs, then later specify how the data is to be laid out in the machine for the most efficient access.

IBM's entry, code-named X10, is a parallel, distributed, object-oriented language developed as an extension of Java. It is designed for systems built out of multicore symmetric multiprocessing chips — such as IBM's Power processors — interconnected in scalable cluster configurations.

X10 takes the advantages of object orientation in Java for serial code and adds language constructs for parallel and distributed processing, says Vijay Saraswat, a researcher at IBM. The early version of X10 simply translates X10 code into Java, but a full-function optimizing compiler will be available to meet DARPA's 2010 deadline, he says.

DARPA says it has "no plan" to pick a winner among the new languages, but it clearly hopes that at least one of them will be a commercial success. And, as multicore processor chips become ubiquitous, that would be a welcome outcome, says Mellor-Crummey.

"What we are seeing," he says, "is not a gradual shift but a cataclysmic shift from the sequential world to one in which every processor is parallel. In a small number of years, if your language does not support parallelism, that language will just whither and die." ◗

NEVER ENOUGH

Richard Barrett, a computer scientist at Oak Ridge National Laboratory in Tennessee, is trying out Chapel, Fortress and X10. He says the promised development productivity will be welcome, but "runtime performance is a concern." He notes that execution efficiency is the ultimate goal in his lab, where the motto is, "Bigger, better, faster, more – and even that is not enough."

"The applications I'm familiar with will be used for several years, or even decades," Barrett explains. "A scientist who has an idea will . . . run a set of experiments, each of which may consume days, weeks or months of computer time when using the most powerful machines in the world. The few machines with these capabilities are quite popular, so an experiment may sit in the queue for hours, days or even weeks. So, easy-to-write code that runs significantly slower than harder-to-write code is not acceptable."

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When a Go-to Guy Takes a Vacation

You should never rely on one person so much that he becomes a single point of failure. But sometimes, you must. By Mathias Thurman

SECURITY MANAGER'S JOURNAL

I'M SURE many of you can relate when I say that a company with a single point of failure is primed for disaster. Sadly, there's one in my department.

My senior security engineer is the go-to person for anything to do with firewalls, the virtual private network and certain other critical aspects of our security infrastructure. There's no one else. That makes me uncomfortable, but when I have brought it to the attention of upper management, I've been told that there is just no budget for more engineers.

So, how about cross-training one or more of the network engineers to administer the firewalls and VPN concentrators? Nope; the network manager doesn't have enough people to handle network-related work, let alone the added burden of firewall, VPN and SecurID administration.

Working Without a Net

Therefore, although I know the danger of relying on one person to maintain all knowledge about any aspect of my department's operations, I have my very own single point of failure. Naturally, a single point of failure can't work all the time, but my guy has been working his tail off for the past six months. When enough was finally enough, he asked to take a couple of days off to be with his family. I checked the calendar for upcoming changes to the infrastructure that might need his attention, and the coast looked clear. I let him take three days off. (Actually, I'm not even going to charge him vacation time; he works so hard that I gave him the days as comp time.)

On Wednesday, I received the first call. The manager of our mobility project needed a VPN set up between us and a service provider. This project enables our field service engineers to use BlackBerry smart phones to access the customer relationship management application on the internal network. Not surprisingly, the setup was needed immediately. Time to roll up my sleeves and get to work.

I've had hands-on experience at different points in my career, but I hadn't touched a Unix console or a firewall in at least a year. As a manager, I spend most of my time on project management, budget issues, personnel problems, policy writing and attending meetings. I simply don't have time for hands-on operational things, and I'm a bit rusty. But with my single point of failure unavailable, I had to make time, rusty or not.

I logged into our partner VPN firewall and attempted to configure the VPN tunnel using the parameters provided by the service provider. Sounds easy enough. But soon I was pulling my hair out as I tried to figure out why the VPN tunnel wasn't being established. I was almost bald when I realized what the problem was: The service provider's Cisco PIX firewall and my company's Juniper NetScreen firewall just don't talk the same language. This is a well-documented issue, but there's no easy fix, and it took me a while to figure out that the solution lay with what is called "proxy ID," which essentially defines which networks are to be tunneled. As soon as I configured the proxy ID properly, the tunnel came up, and I was able to successfully pass the proper traffic between three servers on our internal network and several resources on our partner's network.

> I hadn't touched a Unix console or a firewall in at least a year.

That same day, I received a call from the network operations center about another VPN problem. Our suppliers were having trouble using a portal we had set up for them to access some of our internal applications. The portal is built on a Juniper SSL VPN concentrator, with RSA SecurID tokens used for two-factor authentication, CA Netegrity for single sign-on, and Microsoft Active Directory for identifying authorization levels.

Troubleshooting this problem took me several hours. First, I checked the SecurID logs, which indicated that the users were properly authenticating. The SSL VPN logs indicated that users' log-ons had been successful. Nonetheless, we couldn't be sure that the authentication traffic was reaching all the resources; in that regard, the logs weren't very meaningful.

I deployed a Snort sensor on the network segment that was running the supplier portal infrastructure. The network team configured the sensor on the proper network span ports, and I monitored the network traffic for indications of activity. That showed me that the SSL VPN concentrator wasn't sending properly formatted packets to the Web portal. This was odd, since the logs seemed to indicate that sessions had been successful. I ended up rebooting the SSL VPN concentrator, which fixed the problem. Then I opened up a support call; I'll let my security engineer handle this matter when he gets back.

Oh, how I wish my single point of failure never needed a vacation. But my days in the trenches showed me that he certainly deserved one.

Risky Business

Thank goodness my engineer was gone for just three days. Now that things have calmed down, I can attend to the management of a huge risk-assessment project. We hired a third party to conduct a risk assessment of some of our core applications, including our source-code repository, the product life-cycle management application, an EMC Documentum repository and an application that engineers use to create designs for our products.

I'm most concerned that the consultants have the right focus and that we get the results we need. I don't want to spend upwards of $80,000 for a glorified port-scanning exercise. I want the consultants to spend most of their time on a structured walk-through of the applications, and I want them to do application-specific vulnerability testing. I've given them their marching orders, and they are well under way. The final report could be helpful as I try to obtain additional funds for security infrastructure and personnel. ▸

WHAT DO YOU THINK?

This week's journal is written by a real security manager, "Mathias Thurman," whose name and employer have been disguised for obvious reasons. Contact him at mathias_thurman@yahoo.com, or join the discussions in our security blogs: **computerworld.com/blogs/security**.

To find a complete archive of our Security Manager's Journals, go online to **computerworld.com/secjournal**.

SECURITY LOG

Change and Config Software Updated

Voyence Inc. released a new version of VoyenceControl, software that collects change and configuration data from network and security devices so users can spot security holes. The upgrade unifies network- and security-device data into one management console, the company said. It also checks data from other vendors' security products to ensure that device access is aligned with authorization policies.

Agencies' Progress On FISMA 'Modest'

The Office of Management and Budget's 2006 fiscal report says U.S. federal agencies are making "modest" progress in meeting standards set by the Federal Information Security Management Act. Agencies spent $5.5 billion to provide security for IT assets worth $63 billion. Just two of the 25 agencies examined received "excellent" ratings for "overseeing the effectiveness of their security procedures," while eight were rated "poor" in that area.

Johnny's Harvests Data Breach

Someone broke into the Web site of Johnny's Selected Seeds last month and made off with sensitive customer data, including credit card numbers, The Associated Press reported. A total of 11,500 accounts were involved, and about 20 stolen card numbers have been used fraudulently. The site is being monitored on a 24-hour basis to avoid a recurrence, and other security measures have also been implemented, according to AP. Johnny's has notified all people whose account information was stolen. The FBI is investigating.

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By the Numbers

USELESS INFORMATION

Middle managers spend more than a quarter of their time searching for information necessary to their jobs, and when they find it, it's often wrong, according to results of an Accenture Ltd. survey.

OTHER FINDINGS:

Managers said that **50%** of the information they obtain has no value to them.

59% said they miss corporate information that's valuable in their jobs almost every day because they can't find it.

42% reported that they accidentally use the wrong information at least once a week.

45% said they find gathering information about what other parts of the company are doing to be a big challenge.

57% said that having to go to numerous sources to compile information is a difficult aspect of managing information for their jobs.

40% reported that other parts of the company are not willing to share information.

36% said there is so much information available that it takes a long time to find the right piece of data.

16% reported that they gather and store information using a collaborative workplace such as a company's intranet portal.

IT managers **are the least likely to feel that the information they receive has value, and they spend the most time trying to find it:**

44% of the information that IT managers receive for their jobs is of no value.

47% of IT managers spend nearly 30% of their workweeks trying to track down information relevant to their jobs.

31% of IT managers miss valuable information more than five times a week.

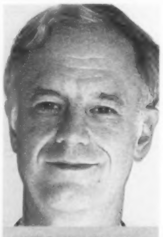
SOURCE: 2006 ACCENTURE SURVEY OF [illegible] BUSINESS AND IT MANAGERS IN COMPANIES WITH REPORTED ANNUAL [illegible]

BART PERKINS

12 Things You Know About Projects but Choose to Ignore

THERE is no mystery as to why projects succeed or fail; people have been writing about effective project management for millennia. More than 2,000 years ago, Sun Tzu described how to organize a successful, highly complex project (a military campaign) in *The Art of War.*

Fred Brooks' classic book, *The Mythical Man-Month,* offers management advice targeted at running large IT projects. The U.K. National Audit Office recently published an excellent guide to delivering successful IT-enabled business change (*www.nao.org.uk/publications/nao_reports/06-07/060733es.htm*). Over the past 10 years, virtually every major IT publication has printed articles on why large projects succeed or fail.



BART PERKINS is managing partner at Louisville, Ky.-based Leverage Partners Inc., which helps organizations invest well in IT. Contact him at **BartPerkins@LeveragePartners.com.**

Despite all the excellent advice available, more than half of the major projects undertaken by IT departments still fail or get canceled. Stuart Orr, principal of Vision 2 Execution, reports that less than 20% of projects with an IT component are successful, with success defined as being delivered on time and on budget while meeting the original objectives.

We know what works. We just don't do it.

Projects fail because people ignore the basic tenets of project success that we already know. Here are some of the common reasons — and there are many — for failure:

An ineffective executive sponsor. A weak or, even worse, nonexistent executive sponsor almost guarantees business project failure. Under weak executive leadership, all projects become IT projects rather than business initiatives with IT components. Since the 1980s, research has consistently found that effective executive sponsorship and active user involvement are critical to project success.

A poor business case. An incomplete business case allows incorrect expectations to be set — and missed. Many business cases describe business benefits in far-too-broad terms. Goals and benefits must be measurable, quantifiable and achievable. (See "Business Cases: What, Why and How" *Computerworld,* June 13, 2005.)

The business case is no longer valid. Marketplace changes frequently invalidate original business assumptions, but teams often become so invested in a project that they ignore warning signs and continue as planned. When the market changes, revisit the business case and recalculate benefits to determine whether the project should continue.

The project is too big. Bigger projects require more discipline. It's dangerous for an organization to undertake a project five or six times larger than any other it has successfully delivered.

A lack of dedicated resources. Large projects require concentration and dedication for the duration. But key people are frequently required to support critical projects while continuing to perform their existing full-time jobs. When Blue Cross attempted to build a new claims system in the 1980s, nearly 20% of its critical IT staffers were simultaneously assigned to other projects. The claims initiative failed. Project managers who don't have control over the resources necessary for their projects are usually doomed.

Out of sight, out of mind. If your suppliers fail, you fail, and you own it. Don't take your eyes off them.

Unnecessary complexity. Projects that attempt to be all things to all people usually result in systems that are difficult to use, and they eventually fail.

Cultural conflict. Projects that violate cultural norms of the organization seldom have a chance. The FBI's Virtual Case File was designed to share information in a culture that values secrecy and rarely shares information across teams. Moreover, FBI culture views IT as a support function and a "necessary evil" rather than an integral part of the crime-solving process. The project violated multiple cultural norms and met with significant resistance. The Virtual Case File was finally killed after costing more than $100 million.

No contingency. Stuff happens. Projects need flexibility to address the inevitable surprises.

Too long without deliverables. Most organizations expect visible progress in six to nine months. Long projects without intermediate products risk losing executive interest, support and resources.

Betting on a new, unproven technology. Enough said.

An arbitrary release date. Date-driven projects have little chance of success. Will we ever learn to plan the project before picking the release date?

See anything new here? That's exactly my point.

Next time, increase your chances for success by avoiding these common project pitfalls. Use the above list (and other industry guidelines) to evaluate your project. If you see too many signs of danger, cut your losses and either restructure the project or kill it.

Talk to experienced project managers and read project management literature to review what works and what doesn't. Though, in fact, you already know. ▸

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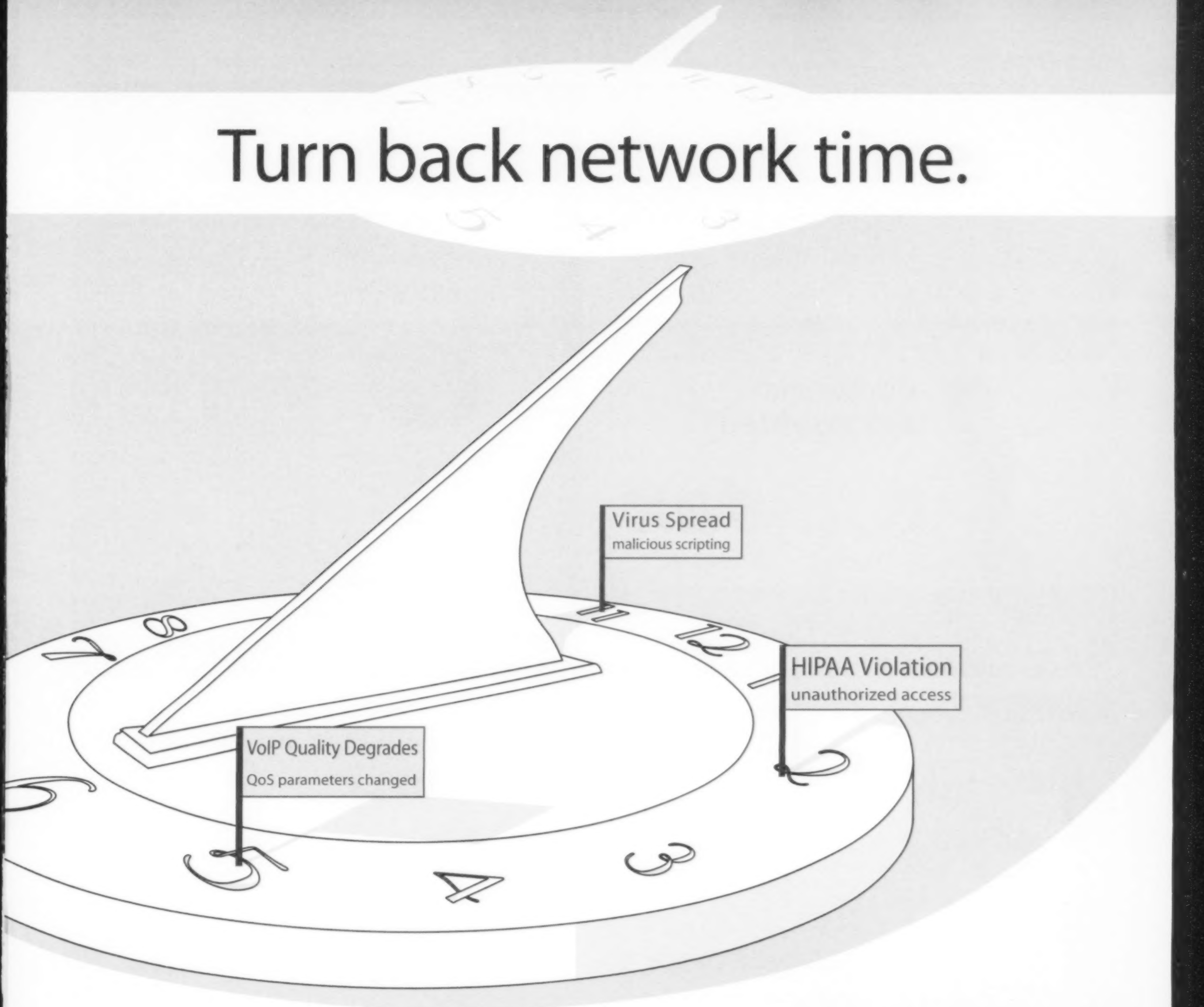
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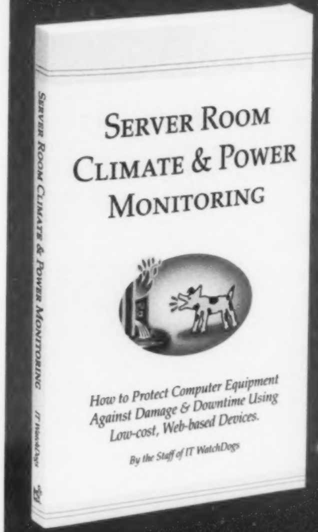
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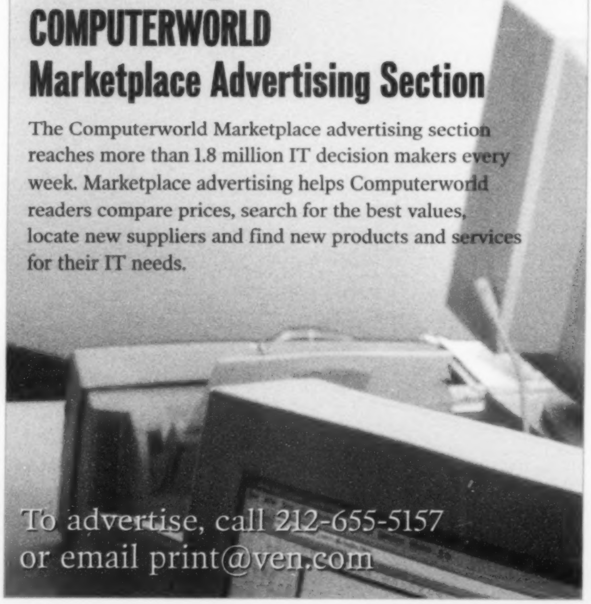

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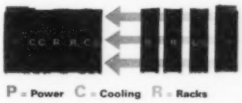

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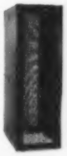

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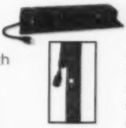

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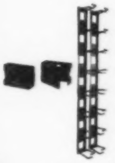

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Office Format

suite so they can open documents from their external business partners. Standard XML, if widely adopted, would alter the situation that has led to vendor lock-in.

But in an e-mail poll of more than 50 corporate IT managers, a majority of respondents said they have no plans to use ODF — though they do have plans to use Microsoft's Office Open XML, the default format in the new Office 2007 suite.

When asked which format she favors, an IT director at a major automaker replied, "In theory, ODF, but pragmatism will drive us to Office Open XML."

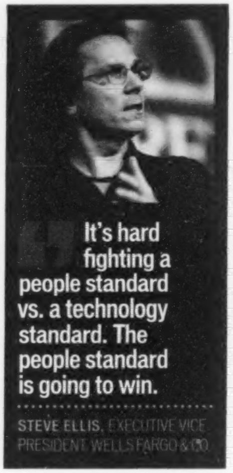
Staying the Course

The desktop plans at The Procter & Gamble Co., one of the bellwethers among large IT buyers, illustrate why ODF is struggling in the private sector. The Cincinnati-based consumer goods giant employs 140,000 people, and, because of its size, finds it difficult to make dramatic changes, said Filippo Passerini, P&G's global services officer and CIO.

This year, P&G will roll out the time-tested Office 2003 across the company, not the new Office 2007. Although Passerini said that he remains open-minded about the potential of ODF, he noted that P&G will continue to use Office's default formats for now.

"If in two, three, five years, there is a significant opportunity to do something different, we'll see when the time comes," Passerini said. "But we don't have a strategy or firm plan in this area yet."

P&G, like all companies, will ultimately have to make a decision about XML document formats. XML is the default format in Word, Excel and PowerPoint for the first time in the recently released version of Microsoft Office. Older Office versions can also be adapted to open and save files in Office 2007's XML format through free add-on software known as a Compatibility Pack.



"It's hard fighting a people standard vs. a technology standard. The people standard is going to win.

STEVE ELLIS, EXECUTIVE VICE PRESIDENT, WELLS FARGO & CO.

But XML is only part of the equation. Corporate IT shops must choose between Microsoft's flavor, known as Office Open XML, and ODF, the ISO standard spawned by Microsoft rivals Sun Microsystems Inc. and IBM.

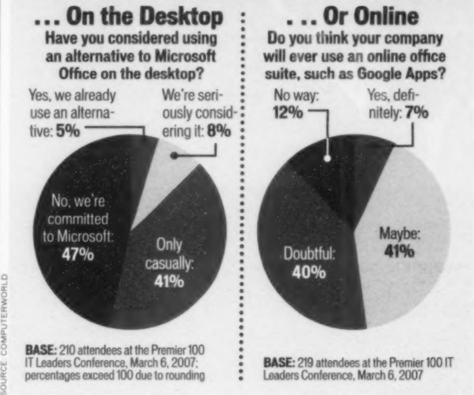
Microsoft is working to match ODF's ISO status, recognizing that such approval can carry considerable weight with government and corporate users. The software maker took the unprecedented step of submitting Office Open XML to the ECMA International standards body and is now pursuing ISO standardization as well.

"We'll probably pick one as the default, to use the most," said Keith Glennan, chief technology officer at Northrop Grumman Corp. "But I suspect we will not be able to completely eliminate one format or the other unless the marketplace does that for us."

For Northrop Grumman, settling on one standard may be tough, because its main customer base is in the government sector, where some interest in ODF is percolating.

IBM, Sun and other ODF proponents have focused on courting cash-strapped government bodies that must preserve public documents, in some cases for at least 100 years, and that increasingly frown on proprietary file formats that require specific applications to open them.

No Imminent Threats to Microsoft Office ...



BASE: 210 attendees at the Premier 100 IT Leaders Conference, March 6, 2007; percentages exceed 100 due to rounding

BASE: 219 attendees at the Premier 100 IT Leaders Conference, March 6, 2007

SOURCE: COMPUTERWORLD

Government Plans

Seven national governments, four regional governments and more than 50 government agencies have signaled their intentions to adopt ODF, according to Marino Marcich, managing director of the year-old ODF Alliance.

"I don't think there's the level of awareness concerning ODF on the corporate side. We're hoping to change that," he said. "It wasn't too long ago that WordPerfect was the ubiquitous format, and no one was predicting it would be supplanted."

But even if ODF catches on in the government sector, that doesn't mean alternatives to the Microsoft Office suite will. The government bodies that Marcich cited as "farthest along" in implementing their ODF plans — Massachusetts and Belgium — have both turned to plug-in software that will allow Office users to open and save files in ODF.

When Massachusetts made its controversial and pioneering decision to adopt ODF, the most prominent office application suites to support the format were OpenOffice.org, Sun's StarOffice and IBM's Workplace. So ODF was often perceived to be tied to a product decision. Microsoft blasted the state's plan, but the firestorm died down with the emergence of ODF plug-ins for Microsoft Office.

Corporations, however, may not want the hassle of ODF plug-ins.

John Hinkle, CIO at Trans World Entertainment Corp. in Albany, N.Y., said that he has found non-Microsoft standards to be difficult to manage and support, "especially when plug-ins are required."

Steve Ellis, an executive vice president and group manager in the wholesale services group at Wells Fargo & Co., said he simply has a hard time envisioning his company deploying a plug-in or moving off its Microsoft Office standard.

"Office is the standard for most companies," Ellis said. "It's a people standard. It's hard fighting a people standard vs. a technology standard. The people standard is going to win." ▸

Surprise: XML-based Document Formats Can Be Smaller

IT MANAGERS often cite compatibility and portability of documents as the main advantages they expect to see by switching to XML-based file formats for desktop applications.

But Danske Bank A/S is hoping for more. The Copenhagen-based bank estimates that it will save $500,000 annually on the cost of storing documents in its storage-area network, thanks to the compression technology in Microsoft's Office Open XML format.

CIO Peter Schleidt said bank officials learned of the prospective storage savings during a visit to Microsoft's headquarters. Initial pilot testing, he added, has suggested that the savings estimates can be realized.

The prospect of smaller files runs counter to the expectations of some IT managers, who in a *Computerworld* poll cited "file bloat" and "larger files" as disadvantages of moving to XML-based document formats.

"They can be compressed since they're text, so part of the Open XML specification, for example, includes standards-based Zip compression technology," said Microsoft's Alan Yates, a general manager of business strategy for Office. "ODF has a similar thing that they've made available."

Microsoft's Gray Knowlton, an Office group product manager, said early findings show that Word and Excel files are between 40% and 70% smaller, and even image-heavy PowerPoint files see a 25% size reduction.

– CAROL SLIWA

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THE BACK PAGE

FRANK HAYES ■ FRANKLY SPEAKING

Numbers Game

NOW that we've survived DST2k7, what's the next big threat we'll have to face? Answer: This is the year we run out of storage. At least that's according to the wonderfully goofy numbers in a new white paper from IDC. In "The Expanding Digital Universe," IDC says that in 2007, the amount of digital information "created and replicated" will be 255 exabytes, while the amount of storage capacity available will only be 246 exabytes — not enough to hold that much data.

Aren't those numbers amazing? And I have no doubt that, since they come from IDC (full disclosure: It's a corporate sibling of *Computerworld*), those numbers are as accurate as possible.

They're also about as meaningless as they could possibly be.

And, naturally, they got big play last week from newspapers and The Associated Press news service, which quoted IDC's description of all that data as the equivalent of 12 stacks of books reaching from the earth to the sun.

That would be a reasonable comparison — if all those videos, MP3s and digital photos were printed out, one byte per character, as books.

But of course they never would be. It's a hugely impressive but utterly meaningless comparison.

And the meaninglessness doesn't stop there. How did IDC come up with that 255 exabyte number? (That's 255 thousand million gigabytes.)

First the IDC analysts collected all their market data for every kind of device that generates or uses digital data — everything from PCs and digital cameras to digital TVs and VoIP phones.

Then they calculated how much data each kind of device generates or uses each year, as accurately as they could.

Then they assumed nothing was ever deleted.

And finally they multiplied by four. Yeah, really. After all, who could resist making three extra copies of everything?

In practice, of course, lots of that digital data isn't stored even once. Digital TVs and radios won't store the broadcasts they receive. PCs don't pile up copies of YouTube videos or Skype calls. IDC's white paper admits that. Without IDC's goofy assumptions, the total amount of data is a small fraction of 255 exabytes.

But that's the way — the only way — IDC could conclude that digital data will outstrip storage this year.

Yes, it's silly. It's meaningless. And it's tempting to laugh this off. After all, IDC's white paper was commissioned by storage vendor EMC. The whole point of the exercise was to convince the world that it's going to need more storage.

Trouble is, those silly, meaningless numbers and examples are likely to come back to bite corporate IT people.

Sure, *we* know those numbers are goofy. We know we're not about to run out of storage. Even if we're not right on top of our current storage utilization, we can be pretty sure there's plenty of storage to be had from EMC, IBM, HP and other vendors at the drop of a purchase order. And we can easily figure out why these goofball numbers have been ginned up.

Now consider your CEO. Let's assume he's not the kind who gets his IT information from airline in-flight magazines. Let's assume he *is* the sort who reads the daily newspaper.

And there he reads that, according to tech researcher IDC, total worldwide data is about to outstrip total worldwide storage.

He asks you. You tell him it's not true. He believes you.

But what are the chances that he'll believe the next round of numbers from IDC? The numbers that indicate e-mail archiving storage requirements are climbing, for example, or instant messages, or VoIP phone calls?

He'll consider the source. He won't believe it. And we'll have to work that much harder to convince him that yes, we really *will* need that storage, and we'll need to acquire it well before the crunch comes.

Thanks for making our lives easier, IDC.

Maybe neither daylight-saving time nor running out of storage will be this year's big threat after all.

Just analysts. ▸

FRANK HAYES, *Computerworld*'s senior news columnist, has covered IT for more than 20 years. Contact him at **frank_hayes@computerworld.com**.

Spring Forward

This IT shop has a big project to make sure everything is updated with daylight-saving time patches, reports a pilot fish on the scene. "In an effort to make sure the patch won't affect one application, a tech asked to apply the patch on a test system but postpone the production patch until March 13, 2007," fish says. "This would give the tech ample time to test the patch. The request was denied."

SHARK TANK

He Does Now

Pilot fish is working on a factory's data network when he spots a self-proclaimed "super tech" fiddling with a Unix machine in the computer room. Why did you just change that workstation's IP address? fish asks. "I just think it's neat that you can do this while the workstation is running," Super Tech replies. Fish: You know that this is our only DNS server? "At which point," sighs fish, "Super Tech ran out of the computer room without saying a word."

That Didn't Help?

Tier 1 tech sends a PC and accompanying trouble ticket up the line to this support pilot fish. The problem, according to the ticket: "System will not re-image after being caught in reboot cycle." And under "Troubleshooting Steps Taken," fish finds a little more detail: "Attempted to re-image. System will not accept. Had a Mountain Dew and tried again. Still not responding. Requested replacement."

Yep, That's The One

Most users at this company are clueless about IT and don't mind admitting it. But one guy is a kibitzer who insists on displaying his IT knowledge as a pilot fish works on a coworker's PC. Once it's running, kibitzer pipes up: "So what was the problem?" Fed-up fish: Well, the hard drive was cross-referencing with the mainframe, causing gigabyte distortion. Kibitzer, sagely: "Ah, I thought that might be the problem."

Nice Try

This office is slated to get LCD displays, so when a monitor dies just before the rollout, pilot fish installs an LCD. Five minutes later, the first me-too call comes in. "He started, 'You know, I have a very bad back' and continued into his pitch about how an LCD monitor would likely help," fish reports. "He couldn't explain exactly *how* it would help, but he just knew it would. He got points for creativity – and a new LCD on the regular schedule."

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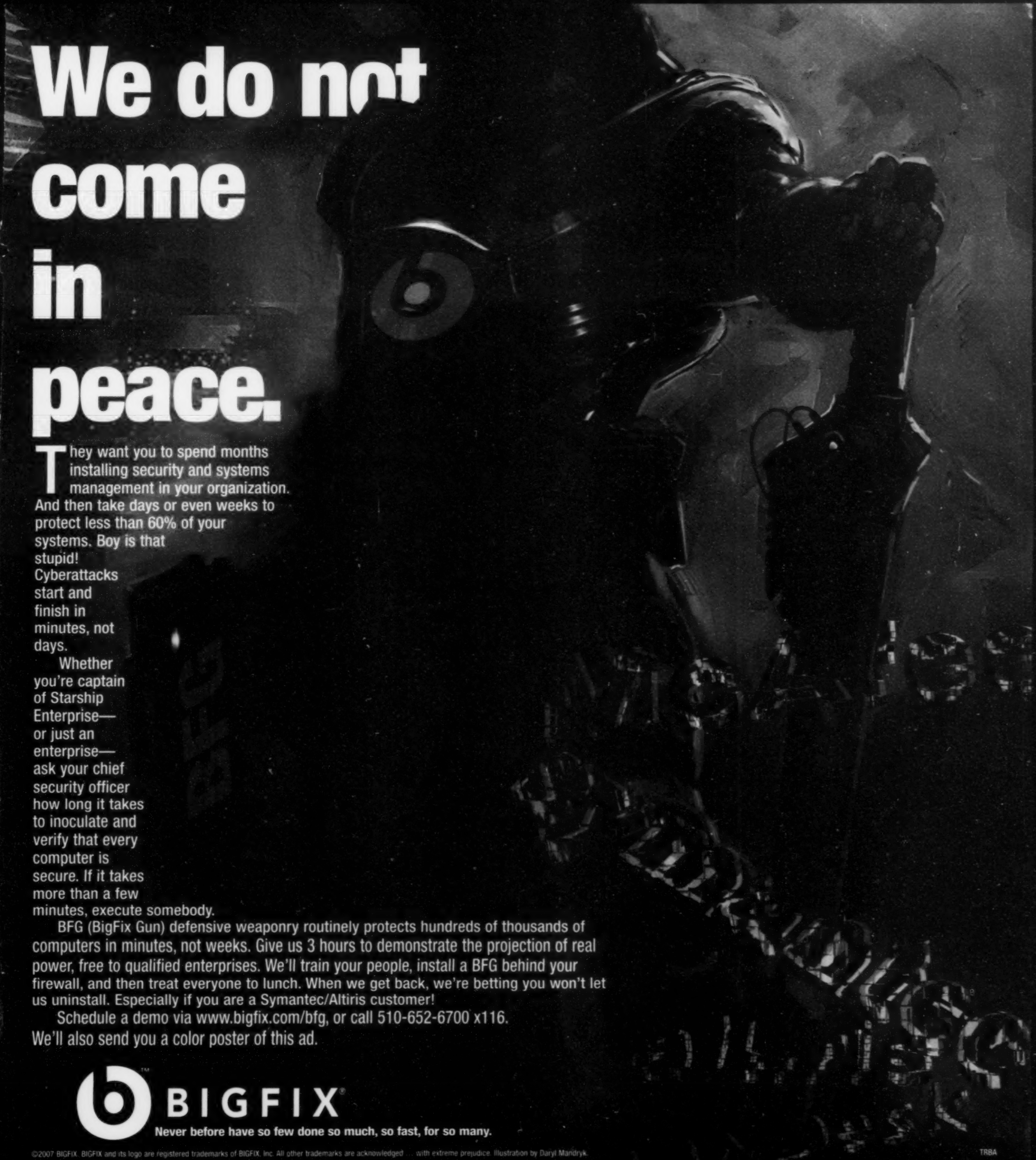

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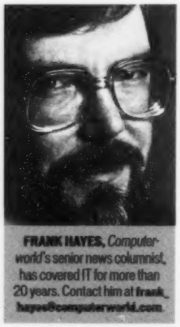

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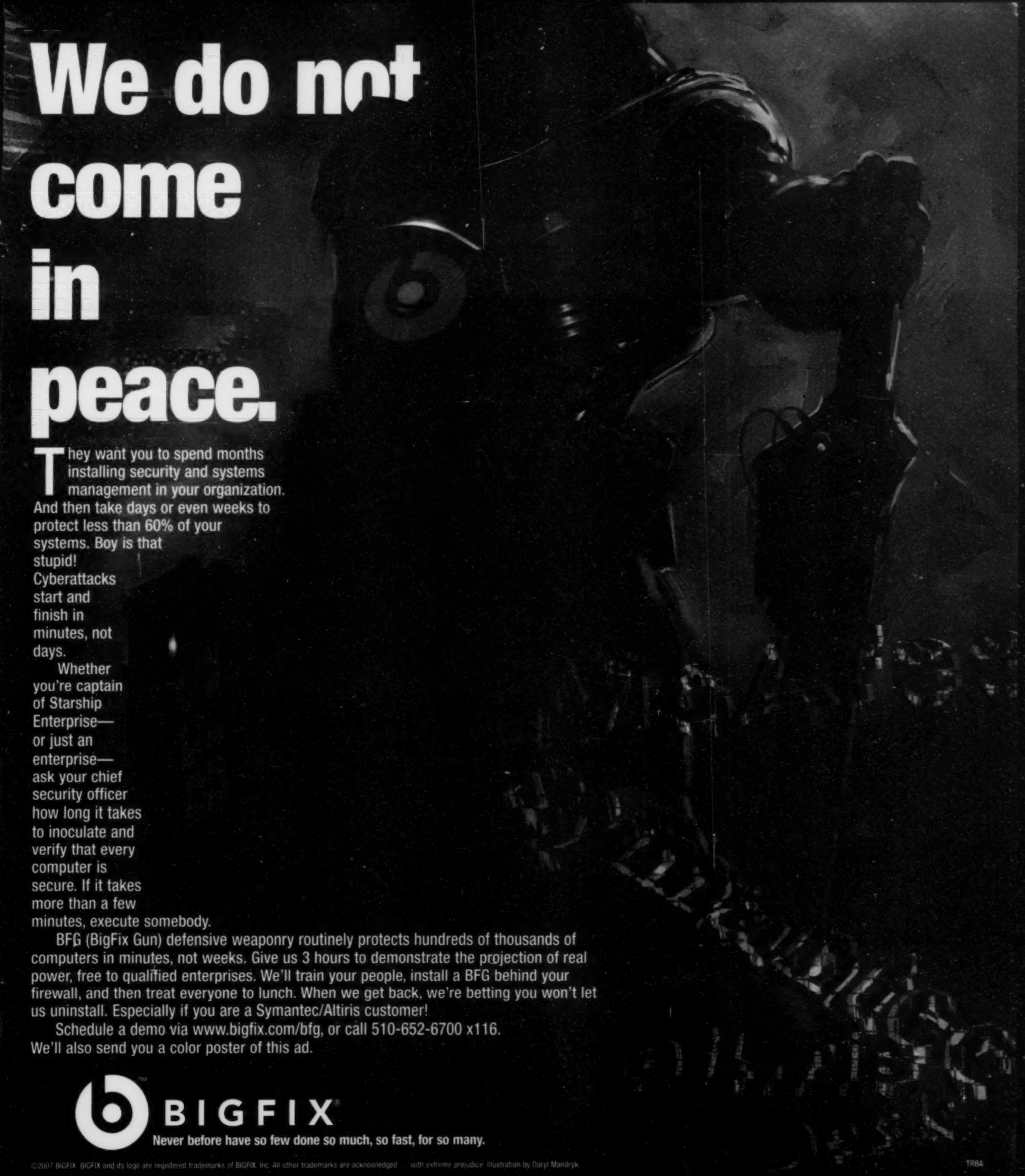

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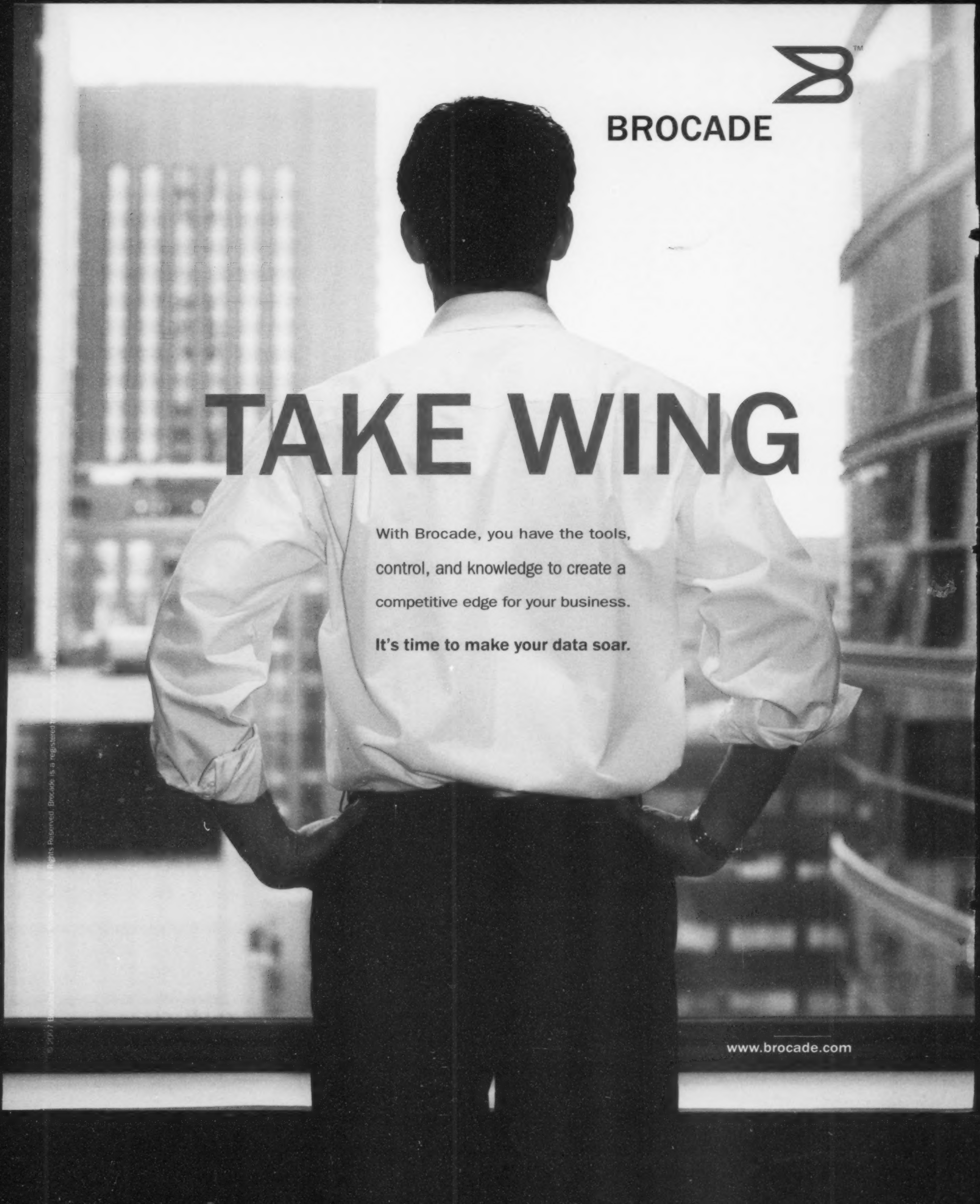

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